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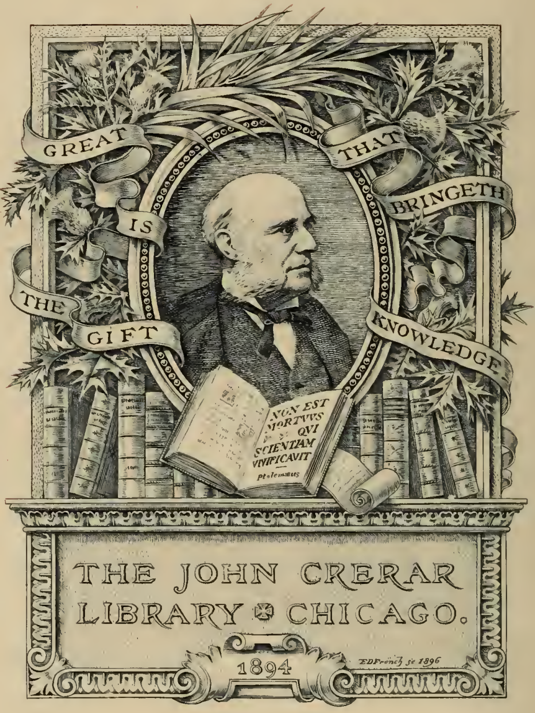
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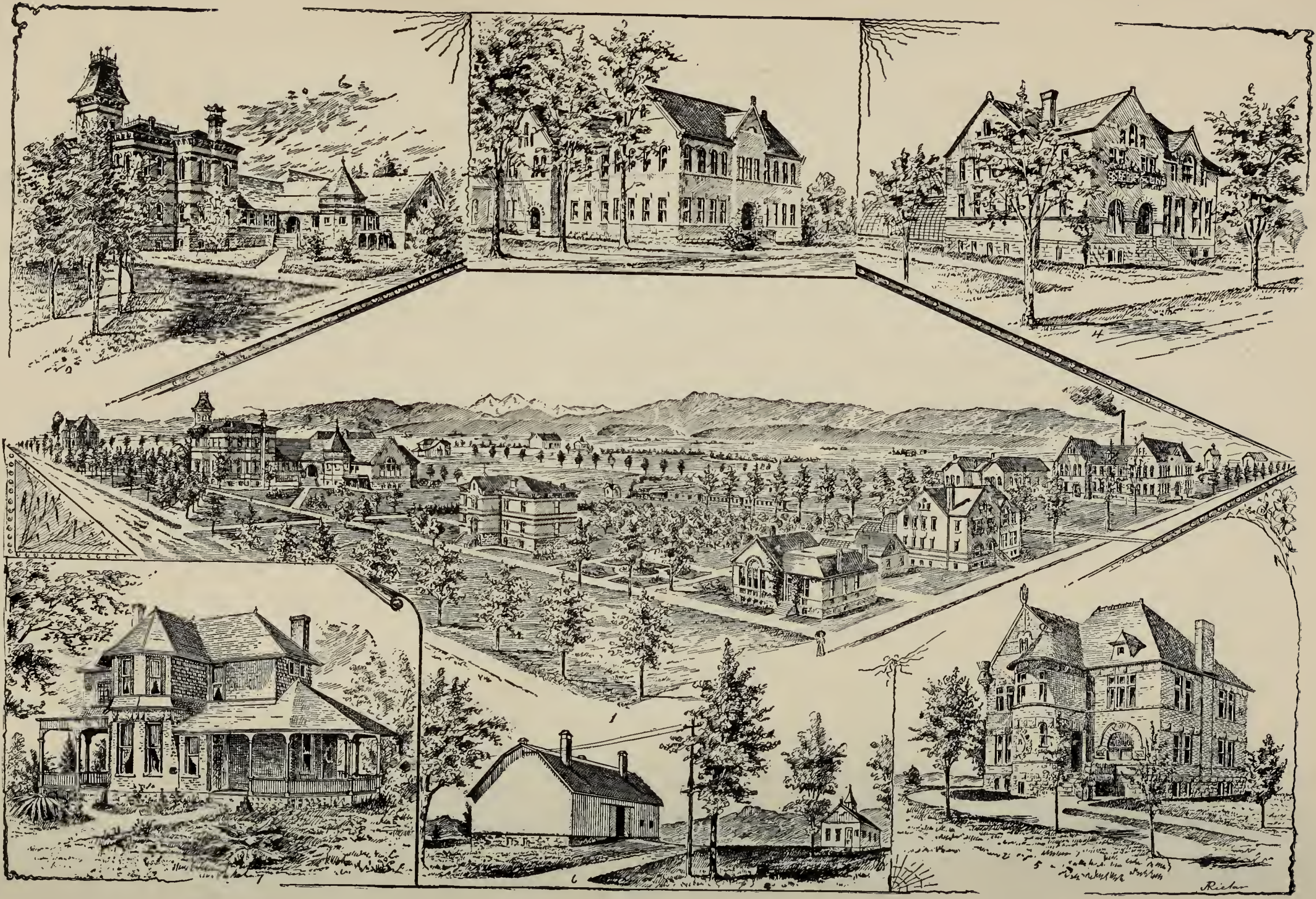

The State Agricultural College Buildings, Fort Collins, Colorado.

Withdrawn

REGISTER

OF THE

Officers and Students

OF

The State Agricultural College

FORT COLLINS, COLORADO.

COURSES OF STUDY

AND

GENERAL INFORMATION.

1893-1894.

FORT COLLINS, COLO.:
Published by The State Agricultural College.
1894.

The State Board of Agriculture.

		Term Expires.
HON. CHARLES H. SMALL,	Pueblo,	1895
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HON. JOHN J. RYAN,	Loveland,	1897
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HON. JAMES L. CHATFIELD,	Gypsum,	1901
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156690
71470

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Instructor in Oratory and Physical Culture.

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Stenographer President's Office.

CELIA MAY SOUTHWORTH,
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EDWARD McCABE, *Florist.*

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LATHROP M. TAYLOR, B. S., Stenographer.

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M. J. HUFFINGTON, - - - - Horticulturist
CHARLES F. BAKER, B. S., - - - Entomologist
CHARLES RYAN, - - - - - - Chemist
R. E. TRIMBLE, B. S., Meteorologist and Irrigation Engineer

SUB-STATIONS.

F. A. HUNTLEY, B. S. A., - - - Superintendent
Arkansas Valley Station, Rocky Ford, Colorado.

J. H. McCLELLAND, - - - Superintendent
Divide Station, Table Rock, Colorado.

CHARLES A. DUNCAN, B. S., - - Superintendent
San Luis Valley Station, Monte Vista, Colorado.

J. B. ROBERTSON, - - - - Superintendent
Rain-Belt Station, Cheyenne Wells, Colorado.

Register of Students.

1893-1894.

Post Graduates.

Alice Bell, B. S., '92,	Fort Collins,	Colorado
Samuel Bell, B. S., '92,	“ “	“
Porter Johnston Preston, B. S., '92,	Longmont,	“
Lewis La Grange Stimson, B. S., '92,	Greeley,	“
Raymond F. Walter, B. S., '93,	Fort Collins,	“

Senior Class.

Philo Kneeland Blinn,	Berthoud,	Colorado
Jacob Hover Cowen,	Hotchkiss,	“
Will Harmon Fairfield,	Denver,	“
Minnie Frances Harrington,	Fort Collins,	“
Herbert Salter Kendall,	“ “	“
Celia May Southworth,	Denver,	“
Harlan Thomas,	“	“

Junior Class.

Jean Bart Balcomb,	Success,	Kansas
Herbert Andrew Black,	Fort Collins,	Colorado
Henry Alvin Calkins,	Harris,	“
Edward Percy Cooke,	Dowagiac,	Michigan
Loren Bradley Curtis,	Littleton,	Colorado
Mabel Giddings,	Fort Collins,	“

William Franklin Gilkison,	La Porte,	Colorado
Seth Curtis Lewis,	Timnath,	"
Edgar Avery Mead,	Greeley,	"
George William Nelson,	Denver,	"
Grafton St. Clair Norman,	Hamilton,	Ohio
Frances Christina Schelt,	Fort Collins,	Colorado
Walter Kolb Starbird	Longmont,	"

Sophomore Class.

Fred Alford,	Fort Collins,	Colorado
George Bloomfield,	Meeker,	"
Edith Gertrude Boothroyd,	Arkins,	"
Florence Jessie Boothroyd,	"	"
Alfred Hiram Bungardt,	Kansas City,	Missouri
Allen Edward Dodson,	Littleton,	Colorado
Nettie Evans,	Fort Collins,	"
Ella Gertrude Goldsborough,	" "	"
Allen Percy Greenacre,	" "	"
Mabel Josephine Hahn,	Loveland,	"
Robinson William Hawley,	Fort Collins,	"
Richard Appleton Maxfield,	Rifle,	"
Abner Sherman McKee,	Montrose,	"
Olof Wallfred Nyberg,	Pueblo,	"
Robert Winfred Sears,	Greenhorn,	"

Freshman Class.

(Including Irregulars.)

Emil Affolter,	Longmont,	Colorado
Frank Affolter,	"	"
Mary Affolter,	"	"
Henry Franklin Alps,	Loveland,	"
Mabel Carrie Blinn,	Berthoud,	"
John Jay Blinn,	"	"

Calla Davis Bullard,	Loveland,	Colorado
Charles Edward Clark,	Elbert,	“
Homer Curtis,	Littleton,	“
Roy Decker,	Fort Collins,	“
Walter George Decker,	“ “	“
Sarah Gertrude Dix,	“ “	“
Percy Golding-Dwyre,	“ “	“
Mark Hudson Flinn,	Loveland,	“
Bertram Alden Gage,	Fort Collins,	“
George Edgar Garrett,	“ “	“
Martha Rose Gilkison,	La Porte,	“
William Franklin Godsmark,	Hot Sulphur Springs,	“
Jesse Walter Goodwin,	Loveland,	“
Archie Jesse Harris,	Fort Collins,	“
Anna Belle Hawkins,	Berthoud,	“
Ralph Henry Hess,	Loveland,	“
William Ashton Hilton,	“	“
Oliver Justice Horner,	Fort Collins,	“
Fred Steck Hotchkiss,	Hotchkiss,	“
Herman Howard,	Greeley,	“
William Ashley Howard,	Fort Collins,	“
Minerva Huberty,	“ “	“
Elizabeth Ellen Ish,	“ “	“
Edward Marion Jacobson,	Livermore,	“
John Edward Kiteley,	Longmont,	“
John August Kroeger	Cortez,	“
Alta Esther Lewis,	Timnath,	“
James Mifflin Loud,	Fort Robinson,	Nebraska
Earl Russell Major,	Denver,	Colorado
Christopher Lyster Montgomery,	Eaton,	“
Hugh Loveland Montgomery,	Fort Collins,	“
Samuel Woodside Moore,	Tipton,	Iowa
Perry Hjalmar Nyberg,	Pueblo,	Colorado
Ida Patterson,	Fort Collins,	“
Bertha May Pegg,	“ “	“

Smith Durie Philip,	Fort Lupton,	Colorado
Anna Laura Picken,	Fort Collins,	“
Mary Elizabeth Prendergast,	“ “	“
Olin Grafton Reed,	Fossil Creek,	“
George Henry Rist	Loveland,	“
Joseph Michael Roeschlaub,	Fort Collins,	“
Henry Morris Roeschlaub,	“ “	“
Albert Jason Rosenow,	“ “	“
Linnie May Rutledge,	Timnath,	“
Scott Fugard Sheldon,	Pueblo,	“
Alice Etheleen Silcott,	Manhattan,	“
Nora Silcott,	“	“
Ross Courtney Stephenson,	Fort Collins,	“
Hiram Hubert Tannar,	La Porte,	“
Edward Sharpe Gaige Titus,	Ottawa,	Kansas
Charles Eugene Towner,	Fort Collins,	Colorado
William Lewis Wade,	Paonia,	“
Fred Montgomery Westlake,	Florence,	“
Hoyt Douglas Whipple,	Berthoud,	“
Percy Warren Williams,	Denver,	“

Preparatory Class.

Harry Allen Arenz,	Denver,	Colorado
Paul Blake Benson,	“	“
Ezekiel Myron Bushnell,	Loveland,	“
Orlie Lee Buttorff,	Fort Collins,	“
Walter Clark Cory,	“ “	“
William Arnett Dickens,	Longmont,	“
Myrna May Dix,	Fort Collins,	“
John Hansford Faulkner,	“ “	“
Walter Clark Fellows,	Denver,	“
Frank Gallup,	Pueblo,	“
Harry George Hammond,	Fort Collins,	“
Jacob Edwards Horner,	“ “	“

Charles Mantz Hottel,	Fort Collins,	Colorado
Ida Martha Lambert,	“ “	“
Adolph Frederick Lindon	Bryant,	“
John Clarence Lines,	Platteville,	“
Herbert Martin,	Alamosa,	“
Walter Willis McCain,	Fort Collins,	“
Catherine McGee,	Hastings,	Nebraska
Harry Glenn Meredith,	Rye,	Colorado
William Crawford Nisbet,	Pueblo,	“
Charles Roy Palmer,	Fort Collins,	“
Benjamin Dory Palmer,	“ “	“
Henry Read,	Denver,	“
Eugene Cammon Reed,	Fossil Creek,	“
Minnie Rockwell,	Fort Collins,	“
John Havener Southard,	“ “	“
George Washington Springer,	New Windsor,	“
Barbara Ellen Tharp,	La Porte,	“
Josie Christmas Yattau,	Loveland,	“
Floyd Stephens Youtsey,	Fort Collins,	“

Special Students.

John Richard Dilworth,	Denver,	Colorado
Grace Gertrude Evans,	Fort Collins,	“
Stella Evangeline Fisk,	“ “	“
Isabel Margaret Furmidge,	Denver,	“
Tinnie Roberson Gillespie,	Fort Collins,	“
Harry Parker Handy	“ “	“
Joseph Henry Lariviere,	“ “	“
George Morrison McKimmie,	Denver,	“
Clara Ella Mitchell,	Salida,	“
Laura Belle Mitchell,	“	“
Helene Jeanette Rhodes,	Ogden,	Utah
Etta May Shafer,	Sardinia,	Indiana
Ella Lavene Slockett,	Fort Collins,	Colorado

Martha May Slockett,	Fort Collins,	Colorado
Elsie Snow,	" "	"
Sarah Elizabeth Stephenson,	" "	"
Emma Sykes Stover,	" "	"
Clide Swem,	" "	"
Edna Maude Turk	" "	"
John Philip Walsh,	Delta,	"

Class in Agriculture.

(Short Course.)

E. A. Atherly,	Fort Collins,	Colorado
I. L. Bailey,	" "	"
Edith May Bailey,	" "	"
Frank Beach,	Lincoln,	Nebraska
Mrs. Warren Blinn,	Berthoud,	Colorado
Bertha V. Brooks,	Fort Collins,	"
Adelbert F. Brown,	" "	"
Charles A. Duncan,	Monte Vista,	"
A. L. Emigh,	Fort Collins,	"
E. T. Hotchkiss,	Hotchkiss,	"
Fred A. Huntley,	Rocky Ford,	"
E. F. Kerr,	Fort Collins,	"
Aaron Kitchel,	" "	"
E. A. Lee, M. D.,	" "	"
Harvey A. Linhart,	Littleton,	"
J. S. McClelland,	Fort Collins,	"
H. S. McClelland,	" "	"
J. H. McClelland,	Monument,	"
Mrs. H. M. McClelland,	Fort Collins,	"
Mrs. M. E. McClelland,	" "	"
Oliver N. McLain,	" "	"
Peter C. Madsen,	Edwards,	"
J. D. Mandeville,	Fort Collins,	"
Malcom G. Mead,	Highland Lake,	"

Ralph E. Metcalf,	Fort Collins,	Colorado
Harry Metcalf,	" "	"
Martie Moore,	" "	"
Peter F. Murphy,	Louisville,	"
John H. Nelson,	Denver,	"
Samuel E. Newell,	Berthoud,	"
Charles E. Pennock,	Belivue,	"
J. B. Robertson,	Cheyenne Wells,	"
Charles E. Schaap,	Fort Collins,	"
Peter N. Spohn,	Bellvue,	"
Frank B. Springer,	New Windsor,	"
Alexander M. Strachan,	Fort Collins,	"
Anna B. Strachan,	" "	"
Cora A. Stone,	" "	"
J. B. Swan,	Loveland,	"
David A. Titus,	Fort Collins,	"
Frank L. Watrous,	" "	"
William F. Watrous,	" "	"
William H. Wells,	" "	"
Mrs. Jessie Patton West,	" "	"
Joseph R. Wills,	" "	"
William F. Ziemer,	" "	"

Summary.

	Males.	Females.	Total.
Post Graduates,	4	1	5
Senior Class,	5	2	7
Junior Class,	11	2	13
Sophomore Class,	10	5	15
Freshman Class,	45	16	61
Preparatory Class,	25	6	31
Special Students,	5	15	20
Agricultural Class—Short Course,	37	9	46
Total,	142	56	198

46
152

GRADUATES.

1884.

George H. Glover, B. S., D. V. M., Veterinary Surgeon, ...Denver, Colorado
Elizabeth Lawrence, B. S., *nee* Coy, at Home, Fort Collins, "
Leonidas Loomis, B. S., Stockman,........... " " "

1885.

Cora B. Blinn, B. S., at Home,..................Berthoud, Colorado
Edna L. Hice, B. S., Teacher,................Fort Collins, "
Lelia L. Robertson, B. S., *nee* Loomis, at Home, " " "
Grace Espy Patton, B. S., Professor of English and Stenography, State Agricultural College,......Fort Collins, Colorado
Robert E. Trimble, B. S., Assistant Meteorologist, State Experiment Station,...................Fort Collins, Colorado
Helen Rigden, B. S., *nee* White, at Home,..... " " "

1886.

Wilbert J. Sickman, B. S., Clerk of County Court,.............................Fort Collins, Colorado

1887.

Eleanor F. Gill, B. S., at Home,..............Fort Collins, Colorado
Daisy E. Stratton, B. S., Stenographer,....... " " "
Lerah S. McHugh, B. S., *nee* Stratton, at Home, " " "
Edwin G. Nettleton, B. S., Engineer,.......Cocorrit, Sonora, Mexico

1888.

Lewis A. Coffin, B. S , Farmer,...................Boise City, Idaho
Harvey H. Griffin, B. S., Assistant Agriculturist, Agricultural College.......................Las Cruces, New Mexico
Josephine Lee, B. S., Teacher, City Schools,......Boulder, Colorado
Genevieve E. McLain, B. S., Teacher, State Normal School,....................................Peru, Nebraska

1889.

Lucy Benson, B. S., *nee* Bell, at Home,..........Loveland, Colorado
Arthur L. Davis, B. S., Medical Student,..........Denver, "

1890.

Clarence V. Benson, B. S., LL. B., Attorney-at-Law, ... Loveland, Colorado
Velma V. Beebe, B. S., *nee* Benson, at Home, ... " "
Burt C. Buffum, M. S., Professor Botany and Horticulture, State University, ... Laramie, Wyoming
Charles A. Duncan, B. S., Superintendent San Luis Valley Experiment Station, ... Monte Vista, Colorado
Newton C. Garbutt, B. S., Attorney-at-Law,.. Fort Collins, "
Helen E. Lunn, B. S., Book-Keeper,.......... " " "
Harry R. Temple, B. S., Steam Engineer,......... Boulder, Colorado
Cora B. Thoman, B. S., Teacher, City Schools,... Loveland, "
Mary L. Weaver, B. S., B. Ph., Traveling and Studying in Europe

1891.

Charles R. Evans, B. S., Merchant, ... Fort Collins, Colorado
Minnie E. McLain, B. S., Teacher,............. Platteville, "
John S. Calkins, B. S., Farmer,.................... Harris, "

1892.

Charles W. Beach, B. S., Student, State University, ... Champaign, Illinois
Frank Beach, B. S., Student, State University,... Lincoln, Nebraska
Alice Bell, B. S., Stenographer and Teacher,.. Fort Collins, Colorado
Samuel Bell, B. S., Teacher,.................. " " "
Don A. Carpenter, B. S., Law Student,............ Denver, "
Porter J. Preston, B. S., State Engineer's Office,... " "
Albert J. Sedgwick, B. S., City Editor the *Express*................................. Fort Collins, "
Lewis L. Stimson, B. S., Surveyor,..... .... Greeley, "
Frank H. Thompson, B. S., Surveyor,............. " "

1893.

John Bloomfield, B. S., Surveyor of Weld County, Greeley, Colorado
Samuel L. Boothroyd, B. S., Engineer, ... Fort Collins, "
Charles J. Gilkison, B. S., Law Student,...... " " "
Ida M. Douglass, B. S., *nee* Lewis, Teacher, ... Timnath, "
William J. Ralph, B. S., Druggist,........... Fort Collins, "
Raymond F. Walter, B. S., Surveyor,......... " " "
William W. Willard, B. S., Merchant, ... Aspen, "

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Vice-President, - - - - - - Cora B. Thoman
Secretary, - - - - - - Raymond F. Walter
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President. Vice-President. Secretary.

Grace Espy Patton. John S. Calkins.

COURSES OF STUDY.

Preparatory Year.

FIRST TERM.

Arithmetic	Wentworth
United States History	Montgomery
English Analysis and Composition	Reed and Kellogg
Drawing	Free-hand

Labor: Farm, ten weeks.
Shop, three weeks.
Wood-carving, L.

SECOND TERM.

Arithmetic	Wentworth
United States History	Montgomery
English Analysis and Composition	Reed and Kellogg
Drawing	Free-hand

Labor: Shop.
Type-writing, L.

THIRD TERM.

Arithmetic	Wentworth
Civil Government	Townsend's Shorter Course
Word Analysis and Composition	Swinton
Drawing	Free-hand

Labor: Shop, two weeks.
Garden, nine weeks.
Molding, L.

Military Drill daily. Ladies take Calisthenics two hours per week. Rhetorical work one hour per week. Readings from American Men of Letters one hour per week.

The Course from this point is separated into:

1. The Agricultural Course.
2. The Mechanical Engineering Course.
3. The Irrigation Engineering Course.
4. The Ladies' Course.

All lead to the degree of Bachelor of Science.

Freshman Year.

FIRST TERM.

Algebra	Taylor
Composition and Rhetoric	Lockwood
Botany	Gray's Lessons
History	Sheldon

Labor:
- Garden, ten weeks; shop, three weeks, A., I.
- Shop, M.
- Wood-carving, L.

SECOND TERM.

Plane Geometry	Taylor
History	Sheldon
Drawing	Instrumental
Agriculture, A., I., L	Lectures
Carpentry and Joinery, M.	Goss

Labor:
- Shop, A., I., M.
- Type-writing, L.

THIRD TERM.

History	Sheldon
Drawing	Instrumental
Botany	Gray, with Coulter's Flora
Plane Geometry, 1-4; Algebra, 3-4	Wentworth—Taylor

Labor:
- Shop, two weeks; farm, nine weeks, A., I.
- Shop, M.
- Molding, L.

Military Drill daily. Rhetorical work one hour per week. Readings from American Men of Letters and American Orators one hour per week. Calisthenics two hours per week for ladies.

Sophomore Year.

FIRST TERM.

Physiology	Martin
Book-keeping, Double Entry	Gay
Rhetoric	Genung
Algebra, 1-4 ; Trigonometry, 3-4	Taylor—Wentworth

Labor : Shop, 1-2 ; Physiology, 1-2, A., I., M.
Home Hygiene, 1-2, L.
Physiology, 1-2, L.

SECOND TERM.

Literature, L.	Kellogg—Library
Physics	Deschanel
Physiology	Martin
Drawing, A., L	Instrumental and Free-hand
Solid Geometry, I., M	Wentworth
Descriptive Geometry, I., M.	Waldo
Farm Buildings and Roads, A.	Lectures

Labor : Physics.

THIRD TERM.

Literature, L	Kellogg—Library
Physics	Deschanel
Surveying, A., I., M	Hodgman
Drawing, L	Free-hand
Ethics, A., L	Lectures
Algebra, I., M	Taylor
Descriptive Geometry, I., M.	Waldo
Agriculture, A	Lectures

Labor : Physics, 1-2 ; Surveying, 1-2, A., I., M.
Readings in Literature ten hours per week, 1-2, L.

Military Drill daily. Rhetorical work one hour per week. Readings from English Men of Letters one hour per week. Calisthenics two hours per week for ladies.

Agricultural Course.

JUNIOR YEAR.

FIRST TERM.

Horticulture	Lectures
Chemistry	Norton
Physics	Deschanel
Landscape Gardening, 1-2	Lectures
Meteorology, 1-2	Lectures

Labor: Horticulture, 2-5; Chemistry, 3-5.

SECOND TERM.

Chemistry	Norton
Geology	Dana
Zoology	Colton's Manual and Lectures
Zoological Laboratory	

Labor: Chemistry.

THIRD TERM.

Agricultural Chemistry	Storer
Entomology	Lectures
Geology	Dana
Irrigation Hydraulics	Lectures

Labor: Chemistry, 3-5; Entomology, 2-5.

SENIOR YEAR.

FIRST TERM.

Agricultural Chemistry	Storer
Agriculture	Lectures
Psychology	Hill
Logic	Gregory

Labor: Chemistry.

SECOND TERM.

Physiological Botany	Strasburger
Horticulture	Lectures
Agriculture	Lectures
Constitution	Andrews

Labor: Physiological Botany.

THIRD TERM.

Agriculture	Lectures
Political Economy	Mill
Recent History	Library

Labor: Farm, 1-2; Garden, 1-2.

Military Drill daily. Rhetorical work one hour per week throughout the course.

Mechanical Course.

JUNIOR YEAR.

FIRST TERM.

Foundry Practice	West
Chemistry	Norton
Physics	Deschanel
Higher Algebra	Taylor

Labor: Shop, 2-5; Chemistry, 3-5.

SECOND TERM.

Chemistry	Norton
Geology	Dana
Analytic Geometry	Wentworth
Drawing	Instrumental

Labor: Chemistry.

THIRD TERM.

Drawing	Instrumental
Calculus	Taylor
Elements of Mechanism	Stahl and Woods
Work-Shop Appliances	Shelley—Rose

Labor: Shop.

SENIOR YEAR.

FIRST TERM.

Drawing	Instrumental
Calculus	Taylor
Logic	Gregory
Psychology	Hill

Labor: Shop.

SECOND TERM.

Drawing	Instrumental
Strength of Materials	Merriman
Transmission of Power	Lectures
Steam Engine	Holmes
Boilers	Wilson

Labor: Shop, 4-5; Testing Materials, 1-5.

THIRD TERM.

Special Chemistry	Blair—Winkler and Lunge
Special Machines	Lectures
Political Economy	Mill

Labor: Chemistry.

Military Drill. Rhetorical work one hour per week throughout the course.

Irrigation Course.

JUNIOR YEAR.

FIRST TERM.

Irrigation Engineering	Lectures—Wilson
Physics	Deschanel
Higher Algebra	Taylor
Horticulture	Lectures

Labor: Horticulture, 2-5; Engineering, 3-5.

SECOND TERM.

Reservoirs and Dams, 1-2	Lectures—Merriman
Hydraulic Construction, 1-2	Lectures
Analytic Geometry	Wentworth
Geology	Dana
Drawing	Instrumental

Labor: Engineering.

THIRD TERM.

Canal Engineering	Lectures—Flynn
Agricultural Hydraulics	Lectures
Calculus	Taylor
Drawing	Instrumental

Labor: Engineering.

SENIOR YEAR.

FIRST TERM.

Calculus	Taylor
Chemistry	Norton
Logic	Gregory
Hydrography, 1-2	Lectures
Meteorology, 1-2	Lectures

Labor: Engineering, 2-5; Chemistry, 3-5.

SECOND TERM.

Chemistry	Norton
Strength of Materials	Lectures—Merriman
Constitution	Andrews
Drawing	Instrumental

Labor: Chemistry, 4-5; Testing of Materials, 1-5.

THIRD TERM.

Hydraulics	Lectures
Trusses and Bridges	Burr
Political Economy	Mill

Labor: Engineering.

Military Drill daily. Rhetorical work one hour per week throughout the course.

Ladies' Course.

JUNIOR YEAR.

FIRST TERM.

Typewriting	
Chemistry	Norton
Physics	Deschanel
Horticulture	Lectures

Labor: Typewriting, 2-5; Chemistry, 3-5.

SECOND TERM.

Chemistry	Norton
Geology	Dana
Zoology	Colton's Manual with Lectures
Typewriting	

Labor: Chemistry.

THIRD TERM.

Chemistry of Common Life	Johnston
Geology	Dana
Recent History of America	Library
Stenography	Scott—Browne

Labor: Chemistry.
Geology.

SENIOR YEAR.

FIRST TERM.

Logic	Gregory
Psychology	Mill
Landscape Gardening, 1-2	Lectures
Meteorology, 1-2	Lectures
Philosophy of History	Lectures

Labor: History, ten hours per week, Library.

SECOND TERM.

Physiological Botany	Lectures
Psychology (Applied)	Hill and Lectures
Constitution	Andrews
Stenography	Scott—Browne

Labor: Physiological Botany.

THIRD TERM.

Recent History of Europe	Library
Political Economy	Mill
Sociology	Lectures

Labor: History, ten hours per week, Library.

Rhetorical work one hour per week throughout the course. Calisthenics two hours per week throughout the course.

RECITATION SCHEME---Fall Term.

TIME.	PREPARATORY.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
7:55 a. m.	General Assembly of Students for Chapel Exercises.				
8:10 a. m.	U. S. History.	Composition and Rhetoric. Algebra.	Rhetoric.	Horticulture. Foundry Practice.	Logic.
9 a. m.	English Analysis.	History. Botany.	Algebra and Plane Trigonometry.	Chemistry, Irrigation Engineering.	Psychology. Chemistry.
9:50 a. m.	Drawing.	Botany. Composition and Rhetoric.	Physiology.	Physics.	Agricultural Chemistry. Calculus. Philosophy of History.
10:40 a. m.	Arithmetic.	Algebra. History.	Book-keeping.	Higher Algebra. Meteorology, 1-2; Landscape Gardening, 1-2. Typewriting.	Drawing. Meteorology, 1-2; Agriculture. Hydrography, 1-2; Landscape Gardening, 1-2.
11:30 a. m. to 12:20 p. m.	Calisthenics and Military Drill.				
1:30 p. m. to 3:30 p. m.	Farm, 3-4. Shop, 1-4. Wood Carving.	Garden, 3-4. Shop, 1-4. Shop. Wood Carving.	Shop, 1-2. Home Hygiene, 1-2. Physiology, 1-2.	Horticulture, 2-5; Shop, 2-5; Typewriting, 2-5; Chemistry, 3-5. Engineering.	Chemistry. Shop. Engineering, 2-5; Chemistry, 3-5. Historical Reading.

RECITATION SCHEME---Winter Term.

TIME.	PREPARATORY.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
7:55 a. m.	General Assembly of Students for Chapel Exercises.				
8:10 a. m.	English Analysis.	Agriculture. Carpentry and Joinery.	Drawing. Literature.	Zoological Laboratory. Typewriting. Analytic Geometry.	Horticulture. Strength of Materials. Stenography.
9:00 a. m.	Drawing.	History.	Solid Geometry. Farm Buildings and Roads. Drawing.	Zoology. Drawing.	Physiological Botany. Drawing.
9:50 a. m.	U. S. History.	Plane Geometry.	Physiology.	Reservoirs and Dams, 1-2; Hydraulic Construction, 1 2. Chemistry.	Agriculture. Transmission of Power. Chemistry. Psychology (applied).
10:40 a. m.	Arithmetic.	Drawing.	Physics.	Geology.	Constitution. Steam Engine.
11:30 a. m. to 12:20 p. m.	Calisthenics and Military Drill.				
1:30 p. m.	Shop. Typewriting.	Shop. Typewriting.	Physics.	Chemistry. Engineering.	Physiological Botany. Shop, 4-5; Testing Materials, 1-5. Chemistry, 4-5.
3:30 p. m.	Shop.	Shop.	Descriptive Geometry.	....	....

RECITATION SCHEME---Spring Term.

TIME.	PREPARATORY.	FRESHMAN.	SOPHOMORE.	JUNIOR.	SENIOR.
7:55 a. m.	General Assembly of Students for Chapel Exercises.				
8:10 a. m.	Civil Government.	Botany. Drawing.	Physics.	Calculus. Entomology. Chemistry of Common Life.	Political Economy.
9:00 a. m.	Word Analysis.	Drawing. Botany.	Agriculture. Literature. Algebra.	Geology. Canal Engineering. Workshop Appliances.	Sociology. Hydraulics. Special Machines.
9:50 a. m.	Arithmetic.	History.	Surveying. Drawing.	Agricultural Chemistry. Stenography. Drawing.	Agriculture. Trusses and Bridges.
10:40 a. m.	Drawing.	Geometry and Algebra.	Ethics.	Recent History. Hydraulics. Elements of Mechanism.	Recent History. Special Chemistry.
11:30 a. m. to 12:20 p. m.	Calisthenics and Military Drill.				
1:30 p. m. to 3:30 p. m.	Shop, 1-6; Garden, 5-6. Molding.	Shop, 1-6; Farm, 5-6. Shop. Molding.	Physics, 1-2; Surveying, 1-2. Readings in Literature, 1-2.	Chemistry, 3-5; Entomology, 2-5. Shop. Engineering. Geology, 2-5.	Farm, 1-2; Garden. 1-2. Chemistry. Engineering. Readings in History.
3:30 p. m.	....	....	Descriptive Geometry.	....	....

DEPARTMENTS OF

Instruction and Labor.

AGRICULTURE.

By means of intelligent experimental work, conducted on the College Farm and at the Experiment Station, in which student labor is given a prominent place, a very practical training is given.

A greater effort than ever before is being made by the authorities to provide a thorough course of instruction in the School of Agriculture, designed especially to educate the students for agricultural pursuits and scientific investigations.

THE REGULAR AGRICULTURAL COURSE.

Special agricultural work is begun in the Winter term of the Freshman year. The subjects considered are stock-breeding and the care of breeding stock. In the Sophomore year, farm buildings and farm roads receive attention. The Spring term of this year is devoted to dairying, with special reference to butter-making.

In the Junior year, the students take up the general subject of Agricultural Chemistry, with special reference to the fertilization and cultivation of crops.

In the first term of the Senior year, there is further instruction in regard to soils and practical irrigation. A large part of the year is given up to the subject of live stock in its various branches; the care and feeding of horses, cattle, sheep, and hogs; the preparation of food, ensilage, soiling, etc.

The whole course is illustrated by the experimental work always in progress and is supplemented by daily practical work on the farm and in the laboratory.

This four-year Agricultural Course is designed to give to the student a thorough knowledge of the principles and practices of Agriculture, and at the same time to provide enough training in other branches of learning to furnish a well-rounded education that shall fit him for the general affairs of life.

For the benefit of those who cannot spend so long a time in study, and wish to do special work in Agriculture, there has been arranged the following:

TWO-YEAR COURSE IN AGRICULTURE.

FIRST YEAR.

First term—1. Agriculture. 2. Botany. 3. Bookkeeping. 4. Composition and Rhetoric. Labor, garden.

Second term—1. Agriculture. 2. Zoology. 3. Physics (elementary). 4. Drawing. Labor, shop.

Third term—1. Agriculture. 2. Botany. 3. Drawing. 4. Entomology. Labor, farm.

SECOND YEAR.

First term—1. Agriculture. 2. Horticulture. 3. Chemistry. 4. Physiology. Labor, chemical laboratory.

Second term—1. Agriculture. 2. Horticulture. 3. Chemistry. 4. Physiology. Labor, chemical laboratory.

Third term—1. Agriculture. 2. Agricultural Chemistry. 3. Drawing. 4. Irrigation Hydraulics. Labor, chemical laboratory. Military drill throughout the course.

SHORT COURSE IN AGRICULTURE.

The past winter there was held the first session of a four-week Short Course in Agriculture, for the benefit of those who are not at liberty to attend regular College classes and who yet feel the need of more agricultural education.

The Course was a decided success. Many farmers, both old and young, availed themselves of the privileges and showed by their words and actions that they appreciated the opportunities offered them.

The Course will be repeated next winter with some enlargements and additions. It will continue four weeks from Monday, January 7, 1895, to Friday, February 1, 1895.

REQUIREMENTS FOR ADMISSION.

Applicants for admission to the Short Course in Agriculture must be at least sixteen years of age and have had training in the ordinary common-school studies.

No entrance examination will be required, and all persons fitted for the work will be admitted without distinction of sex.

EXPENSES.

The State Board of Agriculture has abolished all fees at The State Agricultural College, hence the students of the Short Course in Agriculture will not be required to pay tuition; no laboratory or shop fees will be charged, and no charges made for the use of chemicals and apparatus.

Board can be obtained in private families at $3.00 to $4.00 per week.

The students of this Course will have all the privileges of the library, reading-room, museum, etc., the same as other students.

COURSE OF INSTRUCTION.

Instruction will be given by lectures and by work in the shops and laboratories. The regular daily programme will consist of three lectures, and two hours in the laboratory, shop, or greenhouse.

Stock Feeding—Eight Lectures. The relative value of stock foods; feeding standards; feeding for beef, mutton, pork, milk, butter, etc.; ensilage and the silo; winter shelter for stock; preparation of food—cutting, steaming, grinding, etc.

Dairying—Eight Lectures. Selection and care of dairy stock; dairy breeds; composition and secretion of milk; care and handling of milk; butter and cheese making; milk testing; paying by test at creameries and cheese factories; profitable use of skim milk and buttermilk.

Irrigation Hydraulics—Twelve Lectures. Water supply; measurement of water; duty of water; storage of water; reservoirs; methods of irrigation; irrigation in other countries.

Horticulture — Eight Lectures. Grasses and forage crops; orchard crops and small fruits; grafting; other methods of propagation; improvement through seed selection; cross fertilization; variation.

Entomology—Six Lectures. Insects injurious to farm and garden crops; insect enemies of orchards and small fruits; parasites of domestic animals; methods of preparing and using insecticides; beneficial insects.

Agricultural Chemistry — Five Lectures. Soils and their formation; the nutrition of plants; manures, natural and artificial; fertilizing value of feed stuffs; green manuring.

Farm Machinery and Tools—Three Lectures. Care and use of wood-working tools; care of farm machinery; repairing farm machinery.

The Science of Government—Two Lectures.

In addition to these courses of lectures there will be single lectures by specialists on the following subjects:

The Care and Breeding of Draft Horses.
The Relation of Sheep to Colorado Agriculture.
The Winter Feeding of Hogs.
The Best Breeds for Dairying.
Poultry Raising.

Arrangements will be made for a short course of lectures on Domestic Economy for farmers' wives and daughters.

AFTERNOON WORK.

For two weeks, the practical work of the afternoon will be devoted to the subjects of Irrigation, Horticulture, Entomology, and to work in the Mechanical Department. The afternoons of the other two weeks will be spent in the laboratory and dairy—handling milk, running the separator, ripening the cream, and making butter. Considerable time will also be given to testing milk and to the detection of adulteration in milk and its products.

PHYSIOLOGY

is taught during the first and second terms of the Sophomore year, Martin's Human Body being used as a text-book. Aside from the daily recitations, students spend two hours a day, during the last half of the first term, in the laboratory, to study human and comparative osteology and histology, and to dissect anæsthetized animals, for the purpose of making a careful study of the various organs.

The laboratory is well-equipped, possessing, among other things, a fine series of mounted skeletons, an expensive manikin (a life-sized model of the human body so dissected as to show nearly every tissue and organ that can be seen in an actual dissection), enlarged papier mache models of the eye, ear, brain, and other important parts; also compound and dissecting microscopes, microtomes, and dissecting instruments.

HOME HYGIENE.

This subject is taught during the first six weeks of the first term of the Sophomore year in the Ladies' Course. Instruction is given in those subjects that have to do with health in the home as, the prevention of disease, micro-organisms and disease, care of the sick, care of the home, care of children, food, clothing, exercise, etc.

ZOOLOGY

is taught in the second term of the Junior year in the Agricultural Course and the Ladies' Course. This branch of natural science is taught by means of lectures and actual demonstrations in the laboratory. Each student is furnished with typical forms of the different branches of the animal kingdom, which he studies carefully, making drawings and taking notes. In this manner, the student acquires a practical knowledge of the structure and classification of animals, that he cannot obtain by a mere study of books.

Microscopes, dissecting tools, and all necessary equipment for laboratory work are furnished free, each student being required to care for his own instruments.

ENTOMOLOGY

is taken in the third term of the Junior year in the Agricultural Course, and is taught by lectures and laboratory work. Each student gets together and classifies a collection of insects representing all the orders, and carries a few species through all their transformations, taking notes and making drawings and descriptions.

Particular attention is given to the economic features of this study. Those insects known to be injurious are given special attention, and the students are made familiar with their habits and natural histories. Students also prepare the principal insecticide substances and apply them for the destruction of insects.

In connection with this department are a good apiary and honey-house, thoroughly equipped with the most modern appliances, and students so desiring are taught and allowed to put into practice all the manipulations of the apiary.

Students taking this study are required to purchase Packard's Entomology for Beginners.

BOTANY.

The study of Botany begins with the Freshman year. The Fall term is devoted mainly to Structural Botany. The plant as an individual is studied as to its parts or organs—the relation each part bears to the whole—the variations in the parts, and the uses they serve. Roots, branches, buds, leaves, flowers, and fruits are placed in the students' hands, and the technical descriptive terms are learned by applying them directly to the plants.

Gray's Lessons is used as text to supplement the instruction from the plants themselves. A few lectures on classification and the relations of plants to each other are given toward the close of this term.

The Spring term of the same year is devoted to Systematic Botany. Dissecting microscopes and necessary tools are furnished and plants are each day supplied for analysis. Students are taught the application of the principles learned during the first term, so that they may understand the methods of determining the names of plants. The great variety of plants at hand enables the student to become familiar with all the leading natural orders. Written descriptions of the plants analyzed are required. Coulter's Manual of Rocky Mountain Botany is the text-book used.

PHYSIOLOGICAL BOTANY.

In the Winter term of the Senior year, the Agricultural students study vegetable physiology and the minute structure of plants, using as a text-book Strasburger's Practical Botany.

Compound microscopes are supplied and the Botanical laboratory is open to members of the class two hours each afternoon.

An herbarium of native and foreign plants and the green-house furnish material for study.

A portion of this term is devoted to Cryptogamic Botany, special attention being given to rusts, smuts, and mildews injurious to plants.

The laboratory is well equipped with books of reference and with all necessary apparatus and reagents.

HORTICULTURE.

Instruction in Horticulture is given by lectures. The first course of thirteen weeks, in the Fall term of the Junior year, deals mainly with methods. Under the general head of Vegetable-gardening, the principal topics considered are—the best soil and situation for a garden; manner of laying out a garden; irrigation of garden crops; rotation of crops; methods of planting and management; composts and commercial fertilizers; care of tools; construction, management, and uses of hot-beds and cold-frames; harvesting, marketing, and storing vegetables.

Brief historical notes, and full cultural directions, are given concerning all the vegetable plants commonly grown in gardens.

Small-fruit culture is next taken up; each kind is considered in detail as to its history, propagation, cultivation, harvesting, marketing, the best varieties, and the diseases to which it is subject.

Then follows a series of lectures upon methods of plant propagation, including a thorough discussion of budding and grafting.

Plants, tools, and other appliances are provided for class-room use in giving practical illustrations of the subject treated.

A portion of this term is devoted to Forestry. Lectures are given on the gathering and preservation of forest-tree seed, the planting of seed, and the care of seedlings; on the value of trees for timber and ornament, for hedges, screens, and shelter belts.

A second course of lectures during the Winter term of the Senior year treats of the theory of Horticulture, and considers in detail the underlying principles of garden practice; lectures are given upon the history of cultivated plants, variation of plants under cultivation, as influenced by climate, latitude, altitude, and general surroundings; cross-fertilization and hybridization. Pomology is then taken up, and the theory and practice of orchard management considered in detail.

Floriculture is also treated on such topics as the construction, heating, and management of green-houses, the propagation, cultivation, and management of green-house plants for commercial or private purposes.

LANDSCAPE GARDENING.

One-half of the Fall term of the Senior year is allotted to this study. The general principles of the art are taught by lectures and practical instruction given in the selection and laying out of city and country places. The principal topics are, the selection of a place, the location of buildings, drives, and walks, what to plant and how to plant. The works of Downing and Kemp are used as books of reference.

CHEMISTRY.

It is the object of this department to give the student an opportunity to acquire a thorough mastery of the elementary principles of chemical science. To attain this object, theory and practice are made to go hand in hand. In the first term of the Junior year, the class receives a series of lectures, accompanied by text-book work, upon the general theory of the science, its history and development. In this course of lectures are discussed the subjects of acids, bases and salts, and the principles of chemical philosophy. The natural history, chemical and physical properties of each of the elements are discussed in detail, the whole being illustrated by experiments. While taking this course, the student spends two hours each day in the chemical laboratory, repeating the experiments shown in the class-room, and making others which may be suggested, thus familiarizing him with the various forms of compounds, the marked distinctions between the different classes of salts, the use of chemical nomeclature, and the manipulation of apparatus. Practice in the use of the blow-pipe accompanies this work, and an insight into determinative mineralogy is thus acquired. The use and application of the spectroscope are also taught. The students in the laboratory, at the end of the first term, are examined in the text-book and by analysis of *unknown bodies* in the dry way.

In the second term of the Junior year, the Inorganic Chemistry is finished and Organic Chemistry is taken up. The laboratory work continues four-fifths of the term, and the student takes up the tests for the bases and their separation; also, the tests for the acids and their separation. The students are examined at the close of the second term by means of unknown bodies, composed of mixtures of the several groups of bases.

In the third term of the Junior year the class completes Organic Chemistry, with some practice in Chemical Physics and Stoichiometry. In the laboratory, the separation of the bases and acids is reviewed, tests for the poisons are made, their separation from organic mixtures is worked out, and the analysis of organic compounds is carried on.

In the Agricultural course, in the second and third terms of the Junior year, the students listen to a course of lectures upon Agricultural Chemistry, in which are discussed such subjects as the following: Relation of Chemistry to Agriculture, the literature of Agricultural Chemistry, elements of plant growth, their relative abundance and importance, the atmosphere, the soil, fertilizers, etc. Storer's Agriculture, Johnson's "How Crops Grow" and "How Crops Feed" are used as reference books. Laboratory work accompanies the lectures and work in the text-books. The study of quantitative analysis begins in the gravimetric way, and, after some little practice, students will be directed in any line of special work they may desire.

Keeping in mind the object for which our College is founded, we have so planned our Chemical course as to prepare the student for the general application of Chemistry to the industrial arts, while seeking thoroughly to ground him in the application of science to agriculture. A chemical laboratory, fitted up with modern appliances, balance-room, foul-gas room, and desks for thirty-six students, is ready for the classes.

Students have access to the following current chemical literature: *Chemical News, Analyst, Journal of the Chemical Society, Journal fur Landwirthschaft, Journal of Analytic Chemistry,* and "Fresenius Zeitschrift fur Analyt. Chemie."

GEOLOGY.

Recognizing the fact that Chemistry and Geology are the foundations of agricultural science, the subject of Geology receives corresponding attention. The second term of the Junior year, Dana's New Text-Book of Geology is taken up and continued during the year. The students work two hours, three days per week, in the laboratory. Lectures on Economic Geology are also given. Frequent visits to the mountains and quarries illustrate the practical application of dip, strike, fault, etc. At the end of the third term the students are required to identify and describe twenty-five rocks or mineral specimens.

HISTORY AND LITERATURE.

No education is well rounded without a fair knowledge of History and English Literature.

Excellent opportunities are furnished for the study of these subjects throughout almost the entire course.

United States History, as studied during the greater part of the Preparatory year, takes up the subject with considerable thoroughness, and includes some work in American Literature.

Throughout the whole of the Freshman year, Sheldon's General History is used as a text-book. The most advanced methods are employed. The student is taught to reason about historical events and is required to consult books of reference.

Kellogg's Literature is begun when the class has reached the subject of English History. Thus each historic period and the authors of that period may be considered together. The class-work is supplemented by lectures.

During the last two terms of the Sophomore year, members of the Ladies' Course engage in a more extended study of English and American Literature, including critical readings from selected authors, and special attention to the writings of the five greatest English poets. Every effort is made to promote a taste for the best literature.

During the last term of the Junior year, the Recent History of America is studied by members of the Ladies' Course.

In the Senior year, one term is devoted to the Philosophy of History, and includes such subjects as—our historical resources; laws governing human actions; influence of physical laws over society and human character; influence of religion, literature, and government; development of historical literature; and causes of progress in civilization.

One term of the Senior year is devoted to study of the Recent History of Europe, and eight hours a week are given, by the young ladies, to special reading and investigation in the historical subjects which are pursued during two terms of the Senior year.

A valuable collection of photographs belongs to this department and adds greatly to the interest of its historical work.

The College Library also affords substantial help. Its shelves are well filled with standard literature and with the works of the best historians.

ENGLISH AND STENOGRAPHY.

ENGLISH.

The study of English Analysis is pursued during the Fall and Winter terms of the Preparatory course, followed by Word Analysis during the Spring term.

Composition is taught throughout the Preparatory year, the subjects of punctuation, capitalization, structure and arrangement of sentences, and the fundamental principles of style receiving special attention.

During the Fall term of the Freshman year, the subject of Composition and Rhetoric is continued, with Lockwood's Lessons in English for a text-book. It is the object of this work to enable the student to acquire skill in the logical arrangement of his thoughts, and to express them in a clear and effective manner.

Advanced work in Rhetoric is required of the Sophomore class during the Winter term. The laws of mind and language as related to effective discourse, is a subject which receives special consideration.

Composition writing—essays, orations, etc.,—forms an important feature of the entire course in English.

STENOGRAPHY.

Stenography and Typewriting occupy a prominent place in the Ladies' Course.

The object of the work in these branches is to impress upon the mind of the student the importance of a knowledge of the English language and a correct use of the same in business life, as well as to enable him to become an efficient stenographer and typewriter.

A practical course in book-keeping is given in the Fall term of the Sophomore year.

MATHEMATICS.

The purpose of the instruction offered by this Department is two-fold: First, to give the student clear and exact ideas of magnitudes and their measurement, the principles underlying the methods used, and the general unity pervading the mathematical sciences, or such of them as he has time to become acquainted with; second, to give him such skill in computation as to enable him to handle easily and satisfactorily the practical problems he is likely to encounter in his after life.

The subjects offered are as follows:

ARITHMETIC

is taught the students of the Preparatory class. The year's work is designed to give a thorough review of the principles underlying the fundamental operations, and to give skill in the application of these to the various problems of business arithmetic.

ALGEBRA

is begun in the first term of the Freshman year. The first term's work is designed to give the student as clear ideas as possible of the extensions introduced into the fundamental operations of arithmetic by the notation of two sorts of quantities directly opposed in character, and of the conciseness obtained by the use of literal notation; and to give him sufficient skill in the fundamental operations of Algebra to enable him to solve intelligently simple equations involving one unknown number. Subsequent work acquaints him with the solution of simple equations of several unknown numbers, with involution, evolution, radicals, quadratic equations, and as much more as may be possible in the time allowed to the subject.

GEOMETRY

is taken up as soon as the student is sufficiently acquainted with algebraic methods to apply them intelligently to the computations of this subject. In the two terms allotted to the study it is designed to give the student thorough practice in formal proof by the syllogistic method, to show him the dependence of the entire subject upon the few axioms and elementary concepts derived directly from experience, and to give him thorough practice in the mensuration of geometric magnitudes. So far as the time and ability of the student will permit, he is practiced upon original exercises.

TRIGONOMETRY

is taught in the first part of the Sophomore year. In the time allotted to this branch, the student is given clear ideas of the trigonometrical concepts, shown their connection, and given considerable practice in the practical application of this branch of Mathematics.

DESCRIPTIVE GEOMETRY

is taught to those students electing the two courses in Engineering. The second and third terms of the Sophomore year are devoted to this subject. The principles of parallel and central projection, of development, etc., are discussed and illustrated in the solution of a great variety of problems, and many of these are accurately worked out on the draughting-board by each student.

From the wide application of Mathematics in all branches of Engineering, those students electing either of the courses having to do with Engineering, pursue the study of Mathematics throughout the entire course, with the exception of the last two terms of the Senior year.

The first term of the Junior year is devoted to a brief review of quadratics and radicals, and to the study of the principal algebraic methods usually denoted by the name Higher Algebra. Among the subjects considered are Series of various sorts; Mathematical Induction and some of its applications, such as the demonstration of the Binomial Formula; the Theory of Equations; and various methods of solution of equations of the third and higher degrees.

The second term of the Junior year is devoted to the study of Analytic Geometry. The student is made acquainted with the method of co-ordinates, and the connection between algebraic and geometric forms. The fundamental properties of the conic sections are developed, and as much more of the subject as the time permits.

The last term of the Junior and the first term of the Senior years are devoted to the study of Differential and Integral Calculus. Taylor's Calculus is used as a text-book, and the study is pursued substantially as the subject is there developed. The notion of limits is, however, made the logical basis upon which the subject is developed.

The department is provided with a set of Schroeder models from Darmstadt, for purposes of illustration in the study of Solid Geometry, and with models of warped surfaces, etc. The collection is being added to from time to time. There is a collection of drawings for use in the study of curves and curve-tracing.

MECHANICAL ENGINEERING.

This course is designed to prepare students for the profession of Mechanical Engineering. It teaches the general principles of engineering and unites theoretical work and practical research to accomplish this end. Instruction is imparted by means of text-books, lectures, illustrations, and experiments in testing materials, machines and motors.

As the course in Mechanical Engineering is, in part, designed to enable the student to solve those problems relating to the generation and transmission of power and its application to machines, much of his time is spent in the drawing-room, workshops, and experimental laboratory. The studies of this course which are in common with other courses (Mathematics, etc.) are enumerated and described elsewhere in this catalogue; the others are:

Carpentry and joinery; also wood-working machinery.
Pattern making and foundry work.
Forge work.
Machine and vise work in metals.
Principles of mechanism.
Strength of materials.
Boilers.
The steam engine.
Machine design, machinery and mill work.

Carpentry and Joinery — The class-room work, by means of text-books and lectures, takes up the study of the cutting edge of various wood-working tools and machinery and the means of keeping them in good order; an explanation of the construction of each tool and its manner of acting on the material, the methods of determining how to select materials best suited to different kinds of work, the manner of laying out the work, cutting speed of tools, etc.; the shrinkage and warping of woods and the different modes of sawing into lumber and the various forms and uses of framing and other joints.

Pattern-making and Foundry Work are similarly taught. The most advantageous forms of patterns are discussed with regard to the proper distribution of the metal and best form for molding in the foundry, and, in connection, instruction in core-making and the management of the cupola and brass furnace.

Forge Work, etc., is taught by lectures on iron and steel, and especially with reference to their management in the fire and in the processes of tempering, hardening, and annealing.

Machine Work and Vise Work are taught in a similarly thorough and careful manner.

Principles of Mechanism are studied with reference to the combinations of which machines are composed; and the study of designs for the communication of motion by means of gears, belts, links, etc., forms an important feature of this course.

Strength of Materials is considered by examining the physical properties of the various materials used in construction.

Machine Design is taken up for one term, and the students make designs for various machines and appliances.

Boilers—The various forms are carefully studied from the best authors, and the Department has access to a number of different kinds of boilers upon which actual tests may be made.

The *Steam Engine* is studied in its various forms in general and in detail. The Department has a pair of indicators and all appliances necessary for complete engine tests.

Machinery and Mill Work receive attention, and methods of arranging shops and machinery are investigated; and the transmission of power for shop purposes is studied.

The care and management of shops and the making of estimates are also considered; shop building and appliances receive careful attention.

Attention is called to the combination of the theoretical and practical instruction here offered. Thorough and careful instruction is given with, or is supplemented by, the most practical application of the same in all ways. In every instance where it is possible the work of the class-room is supplemented by work in a corresponding laboratory, where the experimental work is performed according to the latest and most approved methods with the best machines and materials. The practical applications of mechanical theories broaden the conceptions of these truths and make them easier to grasp and more easily retained; by studying the construction of machines the abstract mathematical laws are better understood and their significance becomes more evident.

The shop instruction is divided into courses, and in each course are given, in connection with the work, an explanation of the construction of each tool and its manner of acting on the material, the methods of determining how to select materials best suited to different kinds of work, the manner of laying out work, cutting speed of tools, etc.

COURSE OF LABOR.

Bench work in wood	13	weeks
Wood-turning	12	"
Pattern-making	12	"
Molding and casting	12	"
Iron and steel forging	13	"
Machine work in metals	12	"
Vise work in metals	12	"

BENCH WORK IN WOOD.

This course consists of exercises with the different wood-working bench tools, so arranged in a graded series as to embrace the manipulation of the tools in their various applications.

First—The use of planes in joining, smoothing, and getting the piece out of wind, lining off, and the use of saws in cutting across and with the grain, and keeping to line.

Then follow exercises in making a halved splice, splayed splice, keyed splice, open dovetail mortise and tenon joint, mortise and tenon joint, open dovetail joint, blind dovetail joint, lap joint, dowel joint, small newel post and hand-worked rail, panel door, roof truss, box, carpenter's trestle.

MACHINE WORK IN WOOD.

In connection with this course, with the use of tools, will be given the most rapid and economical method of selecting and preparing the wood for the machine. There will be given examples of straight turning; cutting in and squaring off; concave, convex, and compound curves; handles for chisels and other tools; examples in chuck work in separate and combined pieces; how to turn a ball.

PATTERN-MAKING AND FOUNDRY WORK.

After becoming familiar with bench and machine work in wood, an application of both is made, by constructing patterns with due regard to shrinkage, draft, and the best method of constructing the pattern so that it causes the least amount of trouble in the foundry. There will be given examples of plain work; core work; pulley work; pipe work; gear work; core boxes, their use and construction.

After the patterns and core boxes have been constructed, they are taken to the foundry-room by the students, where molds and cores are made, and castings are made in iron or brass.

In the foundry, the students are taught how to charge and manage the cupola, each student pouring for himself the hot metal for the molds he has made.

The management of the brass furnace and core oven is also taught.

MACHINE WORK IN METAL.

The care and management of the tools, their construction, etc.

Cutting speed of tools and proper angle of cutting edge for different purposes and different metals. Centering and straightening work; straight turning and squaring; boring; making and fitting joints; chuck work; screw cutting, inside and outside; drilling, tapping, and reaming; boring with boring-bar and use of center rest; polishing and finishing; hand-tool work.

DRAWING.

Free-hand copy and dictation; free-hand model and object drawing; light and shade; geometric problems; orthographic and isometric projections and projection of shadows; development and intersection of surfaces; wood carving, diaper, incised and relief.

PRACTICAL MECHANICS.

For those whose time and means are limited, a short course in practical mechanics is provided. This course covers, practically, the work of the Freshman and Sophomore classes.

The work has for its object a systematic and progressive education in the use of tools and materials, combined with as much theoretical knowledge as may be deemed necessary to explain the principles involved. It does not teach special trades, or manufacture salable articles; to do so would require that the student be kept on the kind of work that he could do best, and thus prevent him from acquiring broad and liberal ideas of other methods. So, without teaching any complete trade, the mechanical principles of many are gained. This does not necessarily mean that the student becomes sufficiently expert to compete with the skilled mechanic, but that a knowledge of *how* a tool or machine should be used, and the *manner of laying out work* for it, are thoroughly taught.

Should circumstances be such as to cause the student to enter manufacturing, his ideas have been broadened by this training, and he will more readily grasp anything new that may come up in his business, or, should he take up farming, he will with greater ease be able to understand the mechanical principles and workings of his machinery, and know how to keep it and his buildings in proper repair.

MILITARY SCIENCE.

For instruction in Military Tactics, the students are formed into companies and the companies into an Infantry Battalion with proper Field and Staff.

The system of instruction, being that in use in the United States Army, is calculated to form the habit of prompt obedience, foster the natural martial instinct, and prepare the students, should necessity arise, to organize a company or battalion of our National militia.

The drill includes the School of the Soldier, company and battalion in close and extended order, a thorough course in position, sighting, and aiming exercises, competition with rifle at short ranges, and a series of lectures on castrametation and the art and science of war.

Instruction in Artillery embraces such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, aiming drill, etc. For use in drill, the department has two three-inch rifled field pieces, from the Rock Island Arsenal, and one hundred and fifty cadet rifles, with accoutrements.

Military drill is required of each male student, unless excused for physical disability or by special vote of the Faculty for good and satisfactory reasons. Each cadet is required to purchase a copy of the standard United States Infantry Tactics, for study and reference. He is also to provide himself with a uniform, modeled somewhat after the uniform of the regular army. It is neat and durable, consists of blouse, pantaloons, cap, and gloves, and costs about twenty dollars.

In the Fall and Spring terms, a period of forty-five minutes daily is devoted to outdoor maneuvers. During the winter, the new armory is used and a portion of the time is devoted to recitations in tactics and to lectures.

When possible, an encampment will be held at the close of the Spring term for practical instruction in guard and field duty.

PHYSICS.

Instruction in Physics is given for three terms of the Sophomore and Junior years, the course lasting one complete college year. Laboratory work is carried on two hours daily for one and one-half terms. The important sciences of Mechanics, Light, Heat, Sound, and Electricity are studied. Special attention is given to the latter subject, both in the class-room and in the laboratory, in view of its increasingly important applications, and as a basis for Electrical Engineering. In the course in laboratory work, the student deals personally with the apparatus described in the text-book, performs experiments for himself, and carries on determinations of the physical constants, or experiments in such ways as will give training and knowledge and greater familiarity with the subjects studied.

The following is a selection from some of the laboratory exercises of the past year:

Exercises in exact measurement with micrometers and spherometers.

Exercises in weighing.

Investigation of the sensibility of the balance.

Testing the parallelogram of forces experimentally.

Determination of the acceleration of gravitation by the pendulum.

Investigation of the temperature correction of an aneroid barometer.

Comparison of therometers with standard; testing boiling and melting points.

Measurement of heights by barometer.

Determination of difference of potential.

Construction of a working telephone.

Construction of a battery of one hundred dry cells.

Exercises in electric wiring.

Measurement of internal resistance of batteries.

Determination of battery E. M. F.

Measurement of wire resistance.

Electro-plating.

Determination of densities.

Measurement of candle-power of sources of light, with standard candles.

Determination of focal lengths of lenses and mirrors.

METEOROLOGY.

A six weeks' course is given to the members of the Senior class in the Fall term. This course includes a discussion of the means of taking observations; methods of exposure of instruments and precautions for taking correct observations; the characteristics of climate; barometry and thermometry; influence of the various meteorological elements upon agriculture and upon plant growth; the study of storm movements from the weather charts, etc. The College and the Meteorological Section of the Experiment Station possess a complete line of meteorological instruments, including self-recording thermometers, barometers, rain-gauges, sunshine recorders, psychrometers, etc. Their records, together with the daily charts of the Weather Bureau, are available for illustration and study in connection with the course.

SURVEYING.

The principles of Land Surveying are taught in the last term of the Sophomore year. This course is intended for all the young men, and includes the study of the methods of the United States land surveys; the location of Government corners; the surveying and platting of land; methods of leveling; and the use and adjustment of the necessary instruments. Work in the field is required for six weeks, and each student is required to make a survey and plat his work. There is also given an elementary knowledge of the measurement of water, and the hydraulic laws relating thereto—such knowledge as is useful to every citizen of an irrigated country, and is expected of every surveyor. A more extended training in this line is given, in the later years of the course, to those who are taking the work in Irrigation Engineering.

AGRICULTURAL HYDRAULICS.

This course is intended to include a discussion of the general principles of irrigation as practiced in this and other countries; the different methods applied to grass and other crops; the laying out of grounds for irrigation; canals, flumes, reservoirs, etc.

The course is intended to be a general one, useful to those connected with agricultural work.

IRRIGATION ENGINEERING.

Those who desire to fit themselves for water commissioners, superintendents, canal superintendents, or who may desire to secure a basis for work as Irrigation or Civil Engineers, may enter the course in Irrigation Engineering in the last two years of the College course. It is the aim of the course to give as thorough groundwork as circumstances will allow in the theoretical and practical knowledge of hydraulics, and of engineering as applicable to the special circumstances of irrigation. The special instruction in Civil and Irrigation Engineering extends through the Junior and Senior years, and covers, principally in lectures, the principles in ditch and canal engineering; reservoir and reservoir construction; fluming; canal structures, as headgates, drops, syphons, etc., both in wood and masonry; theoretical and practical hydraulics; bridge-building, trusses, etc. The whole course is accompanied with instruction in draughting and practice in field work sufficient in amount to make the student familiar with instruments and methods. Many of the students do practical work in the surveying of reservoirs, canal lines, gauging of streams, and other similar work. Where this work is approved, it is accepted in place of assigned exercises.

The Department has a good collection of engineering instruments, including transits, compasses, levels, leveling rods, etc. In the Hydraulic Laboratory are found a large tank and scales for measuring and experimenting on the flow of water over weirs and through orifices of various kinds; current meters of various patterns for stream gauging; water registers for studying the flow of water; water motors, etc. It is also provided with a Fairbanks Cement Tester for testing the strength of cement and a testing machine capable of making all tests up to a limit of 50,000 pounds.

There is also available, belonging to the Department and to the Professor of Engineering, collections of photographs and plans of engineering and irrigation structures in Colorado and other States of the Union, as well as in Spain, Italy, France, Algeria, Egypt, India, and Australia. In the present condition of Irrigation Engineering these collections are especially useful.

STRENGTH OF MATERIALS.

This subject occupies one term in the Senior year. It includes the theory of the resistance of materials; calculation of strength of beams, columns, etc. Merriman's Mechanics of Materials is used as a text-book.

TRUSSES AND BRIDGES.

Instruction covers one term, and includes the methods of computing and determining graphically the stresses in trusses; the principles involved in the construction of trusses; their erection, designing, etc.

ORATORY.

Oratory has been defined as the "Art of influencing conduct with the truth sent home by all the resources of the living man."

The study of the Art of Expression is followed in some form throughout the College course. A healthful interest in the subject has been manifested by all the students.

Our public institutions, our form of popular government, great questions of moral and political moment, the almost boundless possibilities within the grasp of individual effort, all tend to increase and intensify the interest in, and to emphasize the importance of, this much-needed branch of education.

Few text-books are required in this branch, as copies of the best selections of English prose and verse are furnished the students. This gives a much broader range and scope to the study, and adds an interest to the work not otherwise attained.

Practical rhetorical work is given by the students before audiences every Friday evening. These entertainments are becoming quite popular and tend to encourage the students to faithful work.

PHYSICIAL CULTURE

is a part of the work required of all lady students. Much interest has been aroused in the young ladies' classes, and much has been accomplished in grace in movement and ease of bearing, promptness, precision, and strength and vigor.

The plan of measurements now in practice in the very best colleges is followed.

Special physical exercises are marked out as the individual needs of each student require, and results are closely watched.

The College is now better equipped for this work than ever before.

PSYCHOLOGY.

Hill's Elements of Psychology is the text-book in use.

The subject is taught principally by recitations, discussions, and lectures. Much oral work is done in connection with recitations based upon the text. Supplementary reading along the lines of recent investigations is encouraged. Contributions to the science, found on the pages of the best periodicals, supplement the text-book statements. The lives and writings of representative thinkers in the domain of metaphysics afford interesting topics for much oral instruction and library investigation. Something is done to point out the sources whence a knowledge of the history of psychology can be obtained. The relations of the subject to the work of the teacher are pointed out and made themes for study and discussion.

LOGIC.

This study is taught by recitations, discussions, and original exercises. Careful consideration is given to the principles of deductive reasoning. The syllogism is analyzed. The principles and methods underlying scientific investigation are made subjects of study, and the basis of class discussion and essay work. Practical application of what the student learns in the study of Logic is made in testing the validity of arguments and detecting fallacious reasoning.

The history of the science is considered and something learned of the writers whose works thereon have recognized merit. Gregory's Practical Logic is the text-book used.

POLITICAL ECONOMY.

The text-book in use is Mill's Principles of Political Economy. Access is had to other standard works, such as Walker's Science of Wealth, Bowen's American Political Economy, Perry's Elements of Political Economy, Gregory's Political Economy, and Andrews's Institutes of Economics.

The important questions with which the subject deals are treated without attempt to uphold any narrow, one-sided view. Economic questions of particular importance to the people of the United States are given special prominence in the recitations, discussions, and lectures. These are considered from a historic and an impartial standpoint.

CIVIL GOVERNMENT.

The study of the Constitution of the United States and that of the State of Colorado, is an important preparation for the duties of citizenship. An elementary text-book is used by the students in the Preparatory class. Later in the College course, a more thorough consideration of the subject is provided for.

PUBLIC RHETORICALS.

Each student enrolled has at least one public rhetorical exercise each College term, unless excused by Faculty vote. These exercises consist of declamations and recitations for the lower classes and original exercises for the advanced students. The importance of these exercises to the student can scarcely be over-estimated, as every one should have a training which will enable him to present his views upon any question in public in an intelligent and a pleasing manner.

DEGREES.

Upon those who complete the work of any one of the four courses in a satisfactory manner, The State Board of Agriculture, upon recommendation of the Faculty of Instruction, confers the degree of Bachelor of Science.

The degree of Master of Science will be conferred upon all graduates of the College who pursue thoroughly some line of work after graduation, and who submit an acceptable thesis.

The degrees of Civil Engineer and Mechanical Engineer will be conferred upon post-graduate students and others who, by reason of satisfactory work, are entitled to receive them.

THE STATE AGRICULTURAL EXPERIMENT STATION.

The Central Station is located at the College, Fort Collins, Colorado, Larimer County. Five Sub-Stations are provided for, four of which are in operation. They are the San Luis Valley Station, at Monte Vista, Rio Grande County; the Arkansas Valley Station, at Rocky Ford, Otero County; the Divide Station, at Table Rock, El Paso County; and the Rain-belt Station, at Cheyenne Wells, Cheyenne County. The fifth, to be in Delta County, has not yet been put in operation.

This department was created in acceptance of the conditions of the Hatch Act, and the work has been arranged in conformity with its provisions.

Bulletins are issued quarterly, or oftener, and reports annually, which are distributed to those who request them as long as the editions last.

THE LIBRARY.

The College Library was founded in 1878 by donations from members of the Faculty and interested citizens, aided by a small purchasing fund derived from the one-fifth mill tax. From this small beginning it has steadily grown in size, and now contains 4,315 bound volumes, and 7,000 pamphlets.

All the books have been selected with great care. The Library contains choice and valuable works on Agriculture; Irrigation, principally by English, French and Italian authors; Mathematics; Physics; Chemistry; Geology; Botany and Horticulture; Physiology; Zoology and Entomology; Mechanics and Engineering; Political Economy; Science of Education; Military Science; General History; English and American Literature; Translations of the Classics; Biography; Travels; etc., etc., etc.

On the shelves are found bound volumes of the following-named periodicals:

Appleton's Journal.
Atlantic Monthly.
American Naturalist.
American Journal of Science.
American Agriculturist.
Agricultural Science.
American Journal of Forestry.
American Machinist.
Anthony's Photographic Bulletin.
American Meteorological Journal.
American Bee Journal.
American Garden.
American Architect.
Bulletin of the Tory Botanical Club.
Botanical Gazette.
Breeders' Gazette.
Cottage Gardener.
Canadian Entomologist.
Chemical News.
Country Gentleman.
Century Magazine.
Contemporary Review.
Eclectic Magazine.
Educational Review.
Electrical World.
Engineering News.
Eclectic Engineering Magazine.
Farmers' Advocate.
Gardeners' Chronicle.
Gardeners' Monthly.
Garden and Forest.
Harper's Magazine.
Journal of Chemical Medicine and Veterinary Surgery.
Journal of the Franklin Institute.
Journal of the Association of the Engineering Societies.
Journal of Science and Arts.
Littell's Living Age.
Nature.
North American Review.
National Live Stock Journal.
Microscopical Journal.
Magazine of Horticulture.
Magazine of Western History.
Mining Industry and Tradesman.
Popular Science Monthly.
Princeton Review.
Publishers' Weekly.
Public Opinion.
Scribner's Magazine.
Scientific Farmer.
Scientific American and Supplement.
The Microscope.
The Horticulturist.
The Forum.
Wallace's Monthly.
Zeitschrift fur Analytische Chemie.

Current numbers of the following-named newspapers and periodicals can be found in the Library reading-room:

American Architect.
American Grange Bulletin.
American Machinist.
American Agriculturist.
American Garden.
American Journal of Chemistry.
American Investments.
American Journal of Analytic Chemistry.
American Naturalist.
American Meteorological Journal.
American Microscopical Journal.
American Journal of Science.
Agricultural Science.
Art Amateur.
Botanical Gazette.
Board of Health Bulletin.
Bee Journal.
Books.
Breeders' Gazette.
Colorado Farmer.
Colorado Index.
Country Gentleman.
Chemical Notes.
Century Magazine.
Cosmopolitan.
Contemporary Review.
Canadian Entomologist.
Critic.
Current History.
Die Gartenlaube.
Die Deutsche Botan. Monat.
Denver Republican.
Electrical World.
Engineering News.
Engineering Magazine.
Engineering Record.
Fort Collins Courier.
Fort Collins Express.
Field and Farm.
Farm and Home.
Forum.
Garden and Forest.
Gardeners' Chronicle.
Journal of Botany.
Journal of Hygiene.
Journal of Education.
Journal of the Franklin Institute.
Journal of the Association of the Engineering Societies.
Journal of the American Economic Association.
Journal of the Chemical Society.
Journal fur Landwirthschaft.
Loveland Reporter.
Live Stock Journal.
Massachusetts Plowman.
Mehan's Monthly.
Microscope.
Nature.
North American Review.
Naturalist's Monthly Bulletin.
Orange Judd Farmer.
Proceedings of the Academy of Natural Science.
Proceedings of the American Society of Civil Engineers.
Proceedings of the Boston Society of Natural History.
Popular Science Quarterly.
Popular Science News.
Physical Review.
Power.
Pacific Rural Press.
Public Opinon.
Printer's Ink.
Popular Science Monthly.
Pharmaceutical Era.
Rural New Yorker.
Review General de Botanique.
Rocky Mountain News.
Review of Reviews.
Scientific American and Supplement.
Safety Valve.
Scribner's Magazine.
The Arena.
The Analyst.
The Entomologist.

Greeley Tribune.
Greeley Sun.
Good Housekeeping.
Grand Valley Star.
Good Health.
Harper's Magazine.
Harper's Weekly.
Hoard's Dairyman.
International Journal of Ethics.
Irrigation Age.
Journal of Morphology.
The Industrialist.
The Ranch.
The Statesman.
The Dakota Farmer.
The Zoologist.
The Auk.
Wallace's Monthly.
West American Scientist.
Zeitschrift.
Zoe.

The Library is well-lighted and furnished. It is open from 8 a. m. to 5 p. m. on week days. Students have free access to the shelves. Books may be drawn for a period of two weeks. The Library is catalogued according to the Dewey Decimal system, the author-and-title catalogue being complete to date. A comprehensive subject catalogue is now being completed. The cards are neatly and legibly written, and systematically arranged in convenient and accessible cabinets.

LITERARY SOCIETIES.

There are two Literary Societies connected with the College—the "Philo-Æsthesian" and "Columbian." Students are admitted to these societies by vote of the members. The fees and dues are not burdensome.

CONDITIONS OF ADMISSION.

The College admits students of both sexes, provided they pass a satisfactory examination in the common branches, viz.: Reading, Writing, Spelling, Grammar, Arithmetic, and Geography; and provided they are at least 15 years of age.

The work of the Preparatory year is, in part, a thorough review of Grammar and Arithmetic, with the additional subjects of United States History, Civil Government, Physical Geography, Elocution, Composition, Word Analysis, and Drawing.

Candidates for admission should appear for examination on the dates announced on the calendar of exercises, preferably at the opening of the College year. Those entering later, or proposing to take advanced work, must be prepared to take a more thorough and prolonged series of examinations.

EXAMINATIONS FOR ENTRANCE.

Examinations for admission to the Freshman class are as follows:

In *Reading*, candidates must be able to read understandingly, and with proper accent and emphasis.

In *Writing* and *Orthography*, they must be able to write from dictation, sentences from standard pieces of English literature, both prose and poetry, sufficient in number to test their qualifications in Penmanship and Orthography.

Candidates will also be required to pass examinations in *Arithmetic*, *Grammar*, and *Descriptive Geography.*

Candidates for advanced classes or work must be examined on all previous work, or bring certificates of standing from schools having an equivalent grade of work.

Those desiring to enter the Preparatory class must show some knowledge of Grammar, and be examined in Arithmetic, as far as interest, and in Descriptive Geography. They must show a general knowledge sufficient to enable them to take up the work.

Specimen questions follow, so that candidates may gain an idea as to what will be required upon presenting themselves for entrance to the Freshman class.

Similarly thorough examinations will be made for admission to higher classes in all subjects completed by them:

SPELLING.

1. The *monument* is a *beautiful example* of the *severely* simple taste of the *period.*

2. A triple *canopy* rises over the *sculptured effigy* of the earl.

3. He rose through his *business capacities.*

4. A *diminutive altar tomb* in *alabaster* marks the spot.

5. She was *created countess* after the *attainder* and *execution* of her *husband* for *alleged treason.*

6. Its *stately* chapter house was the *cradle* of the *parliamentary government* of England and her *colonies.*

7. The state has six *electoral* votes.

8. The *Governor* is *chosen biennially.*

9. The *officers* are Governor, *Council, Secretary* of State, *Treasurer, Attorney-General, Adjutant-General,* and *Superintendent* of Schools.

10. The *merchandise* is *estimated* at forty *millions* a year, and its *manufactures include machinery, locomotives, carriages,* and other *articles.*

ARITHMETIC.

1. Explain reasons for "carrying" in addition and multiplication.

Subtract 21,376 from 22,142, and explain the process used in subtracting units, tens, and hundreds.

2. One acre contains 43,560 square feet. What decimal of an acre in a plat of ground 140 feet long and 125 feet wide?

3. (a) Define *per cent., percentage, base, rate per cent.*

(b) When the percentage and base are given, how is the rate per cent. found? 256 is what per cent. of 3,240?

(c) 192 is 12 per cent. of what number?

(d) A merchant buys cloth at $1.20 per yard. At what price shall he mark it so that he may "throw off" 10 per cent. of marked price and still gain 12½ per cent. of the cost?

4. (a) Define *ratio.* What is the ratio of 16 to 2?

(b) Define *simple proportion* and *compound proportion.*

(c) A plat of ground 5 rods wide and 15 rods long yields 25 bushels of oats. At the same rate what would an acre yield?

(d) A reservoir 15 yards long and 4 feet deep holds 32,500 gallons. Find its capacity in barrels when the length has been increased 18 feet and the depth 1 foot, width remaining unchanged.

5. Find the expense of painting the walls and ceiling of a room 22 feet, 6 inches long, 13 feet, 6 inches wide, and 10 feet high, at 30 cents per square yard.

GEOGRAPHY.

1. Bound the States touching the Atlantic ocean.

2. Name and locate the capitals of the States included in the Mississippi basin.

3. Name and locate the colonial possessions of Great Britain.

4. Name three great railroad systems in the United States.

5. Define latitude and longitude.

6. Name and locate the largest mountain systems of the world.

7. Locate Kamtchatka, Arabia, Hindostan, Australia, and Gibraltar.

8. What States export large quantities of corn? cotton? rice? tobacco? wheat?

9. What are the leading imports of the United States?

10. Name the great republics of the world.

GRAMMAR.

1. What is language? What is grammar? What divisions are made of grammar? Define each.

2. What part of speech is each word in the following lines?

> "She sat like patience on a monument,
> Smiling at grief."
>
> "To err is human."

3. What is a noun? What classes of common nouns? Define each and give examples.

4. What is an adjective? Define descriptive, definitive, participial, and pronominal adjectives and give example of each.

5. Parse the italicised words in the following:

> "*He* is never *poor*
> *That* little hath, *but* he that *much* desires."

6. What is a verb? Tell what properties belong to verbs, and define each. Define redundant, auxiliary, and impersonal verbs.

7. Analyze the following and parse the words in italics:

> "Sleep *is* pain's easiest salve, and *doth fulfil*
> All offices of death, *except* to *kill*."

8. Correct errors in the following: I said it was her setting there. We expected to have seen mary yesterday. Between you and I, that looks suspicious. He is not ready, i don't believe. He saw you and I laying down.

REGULAR AND SPECIAL COURSES.

Unless there are strong and excellent reasons for it, students will not be allowed to take a special course of study; and, in case it is allowed, the student must show that he is well-qualified to pursue the studies selected, by passing such examinations as the Faculty may assign. No student will be allowed to change his course during the progress of a term, or will he be allowed to drop a study, unless by permission of the Faculty.

All applications for special courses of study must be made to the Chairman of the Committee on Examinations, by mail or otherwise, at least two days before the opening of the term. Except under unusual circumstances, it will be useless for any person to apply for a special course of study involving less work than is required of the students in the regular courses.

LEAVING COLLEGE.

A student will not be allowed to leave College in term time without leave of absence granted by the President or the Faculty; otherwise the student will be liable to *suspension* or *expulsion*. Temporary leave of absence can be granted by the President, or the officer in charge during his absence. Final separation from the College must be acted upon by the Faculty.

LABOR.

Labor, two hours each school day, is required of all students not excused for physical disability. This labor (see Course of Study) is performed on the farm, or in the garden, in the shops and laboratories, in field work, in irrigation, and in surveying and engineering.

DISCIPLINE.

The discipline of the College is administered by the Faculty according to a system of demerits.

Misconduct, in or out of classes, unexcused absences from any required College exercises, meddling with College property, etc., receive one or more demerits, as the case may seem to require. Parents of students who receive ten demerits will be notified of the students' misconduct by the President; twelve demerits suspend, while fifteen expel the student from the College.

GRADES IN WORK AND STUDY.

Each student is expected to maintain a grade of 65, on a scale with 100 as perfect. A student is graded as passed in any study, or branch of manual practice, when the average of his daily progress and his term examination equals 65, on a scale of 100 as perfect.

Failure may be made up, and tested by special examination, or the study must be again taken up with a subsequent class.

MEANS FOR INSTRUCTION AND ILLUSTRATION.

The College Hall, with its new addition, contains large recitation-rooms for the following-named departments: Mathematics, English and Stenography, History and Literature; also, commodious Library and reading-rooms, Museum, Zoological Laboratory and recitation-room, with work-room; also offices for officers of the College, rooms for Board of Agriculture, Faculty, etc. Finally, there is a large and well-arranged Assembly-room, with opera chairs, for seating 300 persons; stage, retiring-rooms, cloak-rooms, etc., attached, for the convenience and comfort of the school and the public. The whole is heated by steam and admirably lighted by electric lights. The basement is heated and lighted, and contains an Armory, 40 x 72 feet, for purposes of drill and gymnasium, the heating-plant, bath-rooms, rooms for janitor, storage, etc.

The Chemical Laboratory has a lecture-room for forty students; a work or analytic room, with desks for twenty-four students, each desk being supplied with water and gas for the use of each student, and convenient hoods for ventilation; and a Station Laboratory, with balance-room, distillation-room, etc.

The Botanical and Horticultural Laboratory, completed in May, 1890, has fine rooms for instruction and laboratory work, office, tool-room, seed-room, grafting-room, and ample basement room for storage. The conservatory attached, 20 x 50 feet, contains about 200 species, or 1,000 plants, representing many interesting and rare botanical families, and is heated by improved hot-water apparatus.

The orchards and grounds are carefully laid out and planted to ornamental shrubs and trees. Here are the plantation of forest trees, the kitchen garden, with its many varieties of vegetables and small fruits, hot-beds, and cold-frames.

The new Agricultural Hall is now completed. It is a very attractive building, constructed of red stone and brick. The entire upper floor is devoted to a spacious hall for class-room work. The first floor is divided into a hallway and four large, comfortable rooms. Here are found the office of the Professor of Agriculture, laboratory, agricultural museum, and seed-room. The basement has four apartments which are used for heating apparatus and storage.

The farm of 240 acres, nearly all under cultivation, includes the experimental ground of about 20 acres, containing three plots, A, B, and C, the first consisting of fifty smaller plots, the second of thirty-three, ranging in size from 1-40 to 1-5 of an acre, and the third of sixteen, containing 1-4 acre each. All are permanently laid with drives and walks, and have iron stakes lettered and numbered to designate the corners. These permanent corner-stakes are four feet long, of which three and one-half feet are driven into the earth. In addition, there are several plots of one acre each, for larger experiments on the farm.

The live stock consists of Clydesdale grade draft horses, Short-Horn Durham cattle, and Berkshire hogs. Other representative breeds of stock will be added as rapidly as means and accommodations will admit.

The Mechanic Arts Hall includes a large main building two stories in height, and an ell portion one story high.

The machine-shop occupies the first floor in the north end of the building; it is supplied with a fine assortment of apparatus for working the metals. Around the room are benches, with iron vises fitted for the work in filing and chipping; and connected to the main-line shaft are the following high-grade machines: A Gray 6-foot planer, a Brown & Sharpe Universal milling machine, with gear-cutting attachments, a Gould & Eberhardt 15-inch shaper, a 14-inch and a 17-inch engine lathe, and a speed lathe, a Bickford 20-inch drill, a grind-stone, and an emery wheel. In addition, there is supplied a good assortment of gauges, reamers, taps, dies, and other small tools.

At the end of the machine-room is the office and the tool-room. In the tool-room are kept such tools as are not in general use, but which are necessary for special work, or such tools as would become injured or lost if scattered around. By an order, any tool in the tool-room can be obtained and used by the students. In the west end of the machine-room, a space is set off for experimental work in the testing of materials, valve-setting, testing by brakes, etc. This testing laboratory is supplied with a testing machine, a 12-horse power Hendey & Meyer engine fitted with a Prony brake, a Blake steam-pump, gauges, thermometers, indicators, etc.

Opening from the machine-room is the engine-room, which is separated from the hall by glass partitions. In this room is the 50-horse power Harris-Corliss engine for running the shops. This engine is supplied with indicator attachment, and the students are given a chance to take and work up indicator cards. For this purpose the department has a pair of Crosby indicators with extra springs. A dead-weight gauge-tester affords a means of correcting steam-gauges.

Opposite the engine-room is the wash-room, with lockers for the use of one hundred students.

Adjoining the wash-room, is the boiler-room, containing the large boiler used to furnish the engines with steam and to heat the building.

The Department of Engineering and Physics occupies the building formerly known as the Dormitory, which has been fitted up for its use.

The main class-room is on the second floor. It has seats for a class of forty-six students. The windows are fitted with shutters, in order that the solar projection apparatus may be used for illustration of topics under instruction. The table is fitted with water-tank and pneumatic troughs. A second room on the same floor is used for storage of the instruments used in class instruction and as a museum of irrigation and engineering appliances. On the first floor are the offices, and the rooms for carrying on the work of the Section in the Experiment Station. There is also a draughting-room for the Engineering students.

The basement is taken up with the physical and the hydraulic laboratories, one-half of the area being used for each. In the physical laboratory are firm tables provided for the students, with place for each student, where the apparatus may be left from one day to another without disturbance. A concrete floor, to lessen injurious vibration, is used to make the room available for the use of delicate instruments.

The hydraulic laboratory has tanks and a large set of suspended scales, weighing 5,000 pounds, for testing the flow of water through orifices and over weirs. Here also is placed the Pelton water-motor and the cement-testing instrument, together with some other portions of the equipment, pipes, pressure-gauges, etc., for experimentation. The experiments on measuring running water in streams are carried on in the adjacent streams.

In Physics, the Department has an excellent working equipment in all branches, the equipment having been selected for its usefulness, and for its adaptability to experimentation as well as for illustration. It includes a set of United States Standard Weights and Measures, prepared for the College under special act of Congress; micrometers; balances; spherometers; gauges; gyroscope; air-pump and accessories; thermometers; mirrors and lenses; projecting lantern; electrical machines; dynamo; batteries; standard B. A. ohm; Queen 100,000-ohm resistance coil; astatic, sine, tangent, and D'Arsonville galvanometers; Edelmann ohmmetre; quadrant; electrometer; voltmeters; telephones; standard cells; and much minor equipment.

For use in Engineering and Hydraulics, it has Colorado, Lallie and Fteley current meters, the latter with an electrical recording attachment; a Darcy-Pitot tube; registers to record the rise and fall of water, one imported from Paris to record, electrically, at a distance of some miles; large scales and tanks for experimentation on the flow of water through orifices and over weirs, and to study the laws of flow; pressure gauges; photographs and plans of hydraulic structures; and a collection of slides for the lantern made from negatives taken in this and other countries. A water-motor, presented to the Department by the Pelton Water Wheel Co., a water-meter, presented by the Equitable Meter Co., and a centrifugal pump add to the equipment.

In Engineering instruments, it has a Gurley and a Randolph compass; Foster, two Gurley, a Young and a Buff and Berger transits; five levels, including makes of Randolph, Gurley, dumpy and Y levels of Buff and Berger; plane table of Keuffel and Esser; leveling rods of various patterns; chains and tapes for land surveying and for engineers' use; hand levels; planimeter for determining areas; apparatus for photographic surveying, odometer, etc.

A Fairbanks cement-tester, with full set of molds, gives the means of testing the strength of cements to 1,000 pounds per square inch. A large 50,000-pound testing-machine gives the opportunity to test other materials within its limits.

A complete set of meteorological instruments, many of them imported, is in daily use. This set includes barometers, thermometers, psychrometers, anemometers, statoscope, pluviometers, actinometers, solar and terrestrial thermometers, evaporation tanks, soil thermometers, etc.

The Military Department has one hundred and fifty cadet rifles and two 3-inch rifled field-pieces from the War Department. Each year there is issued a supply of ammunition for both branches of service, in order to give training in infantry skirmish drill, target practice, and artillery firing.

The Scientific Department is supplied with a fine cabinet of specimens, illustrating Botany, Entomology, Geology and Mineralogy, Zoology, and Comparative Anatomy.

LOCATION.

The State Agricultural College is located in Fort Collins, Colorado, the county seat of Larimer County, which is one of the most prosperous agricultural counties in the State. The town contains 2,700 inhabitants, and is beautifully situated about five miles from the foothills, and in full view of Long's Peak and many miles of the Snowy Range. Its supply of water is derived from the melting snows of the mountains; its streets and buildings are finely lighted by an excellent electric light plant; and its sidewalks are exclusively made of excellent flagstone, which is found in large quarries almost at its doors.

The College is at the south side of town; on either side of the Colorado Central Railroad are its buildings and the farm. Visitors are always welcome. They find the town accessible by four trains, which arrive daily from Denver and other points. With the advantages of pure water, a beautiful location, electric lights, and steam heat, not much is left to be desired. All the surroundings of the College are favorable to the carrying on of the work which it is its mission to perform.

HISTORY.

The origin of The State Agricultural College of Colorado, like that of its sister institutions in other States, dates back to an act of Congress, passed July 2, 1862. Therein it is proposed to endow in the several States and Territories, by grants of public lands, "*a college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.*"

This act gave the College an endowment of 90,000 acres of land. From this source the College now receives an annual income of nearly $7,000.

The Constitution of Colorado gives the College an independent existence and a permanent home in Fort Collins. Three citizens of the town donated to the State *two hundred and forty acres of land* whereon to erect the necessary buildings. In 1877, the Legislature provided for the support of the College by levying a tax of one-tenth of a mill on all the taxable property of the State. At this time "The State Board of Agriculture" was created, and all matters pertaining to the management of the College were placed under its control. The one-tenth mill levy was increased, in 1879, to one-fifth of a mill. The present levy of one-sixth of a mill dates from an act of the Legislature passed in 1891. The corner-stone of the Main College Building was laid July 27, 1878. This building was completed and ready for occupancy early in the following year.

The Legislature, in addition to providing for the support of the College by the mill tax, before named, has made the following-named special appropriations:

YEAR.	AMOUNT.	FOR WHAT PURPOSE.
1881	$ 5,000	College Dormitory.
1883	$10,000	Mechanic Shop.
1889	$18,000	Extension of Main Building.
1893	$ 6,500	Sewer System.

The State Experiment Stations are intimately connected with the College, and are under the control of its governing board. These stations, five in number, owe their existence to the acceptance, by the State, of the provisions of the Congressional Act, better known as the "Hatch Act," of 1888. The College receives $15,000 a year from the Treasury of the United States for the performance of the experimental work required of the stations.

The College also receives support from the General Government under the provisions of an Act of Congress, passed August 30, 1890, known as the "Morrill Bill." The first annual payment from this source was $15,000. The act provides that this sum shall be increased $1,000 yearly until it reaches $25,000, when it shall become permanent.

The annual revenues of the College may be summarized as follows:

1. Land Income Fund, derived from interest on money received from sales of land donated by the General Government, and rents of leased lands not yet sold. —$7,000.

2. "Hatch Act," support of the United States Experiment Stations—$15,000.

3. United States Fund, "Morrill Bill," in 1894—$20,000. (This will ultimately reach $25,000 per annum.)

4. Special Fund, derived from sale of stock, farm products, and the like (estimate based upon the average for four years)—$1,500.

5. State Tax Fund, one-sixth mill on all the taxable property of the State—$36,000.

Yearly receipts from all sources—$79,500.

An inventory, taken in December, 1892, shows the value of the College buildings, grounds, and equipments to be $187,847.53.

The Experiment Station property, under the control of The State Board of Agriculture, is valued at $25.037.12.

Prior to 1887, but one course of study was pursued by students. Since that date the course has been uniform up to the close of the Sophomore year, and at that point has been differentiated. The following-named courses, from which students can make choice, all lead to the degree of Bachelor of Science: Agricultural Course, Mechanical Course, Irrigation Engineering Course, and Ladies' Course. There is also provision made for a "Short Course of Agriculture," but no degree is conferred upon those who complete it.

The enrollment of students and the number of graduates for each year since the opening of the College, are as follows:

ENROLLMENT.

YEARS.	MALES.	FEMALES.	TOTAL.	GRADUATES.
1880	14	11	25	0
1881	35	22	57	0
1882	49	32	81	0
1883	50	31	81	0
1884	40	37	77	3
1885	50	46	96	6
1886	45	42	87	1
1887	63	42	105	4
1888	71	38	109	4
1889	73	34	107	2
1890	56	18	74	9
1891	77	29	106	3
1892	101	45	146	9
1893	135	44	179	7
1894	142	56	198	7

All College fees were abolished in January, 1891. *Tuition in all the regular and special classes of the College is free.* There is no charge of any kind for material used in laboratory work or for books taken from the College Library.

A fair statement of the necessary expenses of a student for the College-year of forty weeks, is as follows:

Board, heat, light, and room-rent	$160 00
Cadet uniform	21 00
Laundry expenses	20 00
Books, stationery, etc.	15 00
Total	$216 00

Board in private families can be obtained at from $3.50 to $4 per week. Students who labor on the farm or in the garden receive from 5 cents to 15 cents per hour, according to the quantity and quality of the work performed.

The Library contains 4,315 books and 7,000 pamphlets, and is kept open throughout the year. The will of Mrs. Anna Jones, deceased, gives the College authorities property, valued at $5,000, which is to be sold and the proceeds used in the purchase of books for the Library.

The College now comprises the following-named departments: Agriculture; Botany and Horticulture; Chemistry and Geology; History and Literature; Mathematics; Mechanical Engineering and Drawing; Military Science; Physics and Irrigation Engineering; Zoology and Entomology; English and Stenography; Elocution and Calisthenics; Logic and Political Economy; Psychology and Civil Government; Civil Engineering; and the Experiment Station.

The work of the College is carried on in strict conformity with a section of the General Laws of the State, which reads as follows:

"The design of the institution is to afford thorough instruction in agriculture and the natural sciences connected therewith. To effect that object most completely, the institution shall combine physicial with intellectual education, *and shall be a high seminary of learning*, in which the graduates of the common school, of both sexes, can commence, pursue, and finish a course, terminating in thorough theoretical and practical instruction in those sciences and arts which bear directly upon *agriculture and kindred industrial pursuits.*"

REPORT OF

THE VISITING COMMITTEE.

To the Executive Committee of The State Board of Agriculture:

Gentlemen—The undersigned, members of a Committee appointed to examine the work of The State Agricultural College and the Experiment Station connected therewith, at Fort Collins, Colorado, met, with that object in view, January 4, 1894.

We believe that some date early in the fall would be a more suitable time to make observations about the College grounds and Experiment farm, and are glad to learn that it is proposed hereafter to set an earlier date for the Committee's visit.

The College grounds are conveniently adjacent to the city. The lawns are well arranged and well kept and the shrubbery and trees are both useful and ornamental. The architectural appearance of the buildings is very good. Altogether, the surroundings are such as to cultivate a taste for the beautiful in the minds of the students.

The buildings are heated by steam, lighted by electricity, and have connected with them the best possible sanitary arrangements. A sewer has recently been completed more than a mile in length. With this, all the buildings on the College grounds have been connected.

Taking into consideration that the State is not yet out of its "teens," the College is fairly well supplied with the necessary apparatus to illustrate the work going on in the different departments. The class-rooms are commodious, well-lighted, and furnished with the best of seats. We find the instruction given by the members of the Faculty to be of a highly practical and a very thorough character. The students are studious and orderly. We found the government to be all that could be desired.

The present corps of instructors could impart instruction to many more students than are now in attendance. To secure an increase of students, the greatest need is that of a dormitory of sufficient size to accommodate all the students who may attend from a distance. Thus the cost of board and lodging would be materially reduced and students would be brought more within the immediate control of the Faculty outside of recitation and work hours. It is believed, by the Committee, that dormitory accommodations of the right kind would be an additional inducement for parents to send their children to the College.

The Department of Horticulture and Botany stands greatly in need of a new building with greenhouse attachment. The building which contains the class-rooms and laboratories of the Chemical Department is in an unsafe condition and urgently calls for extensive repairs. The better plan, doubtless, would be to tear down the building and build a better and larger one.

A building, with all necessary appliances, in which Domestic Economy could be taught, is a pressing need. Such instruction would be of prime value to the rapidly increasing number of young lady students. We recommend that such a building be put up at the earliest practicable time.

We believe that more attention should be given to the feeding and management of some of the best breeds of dairy cattle and mutton sheep, with a view of determining the best methods of condensing farm products for market.

Owing to the growing interest in orchard planting, we commend to your favorable notice the field work in the Horticultural Department, to the end that practical illustrations be made of the effect of insecticides upon destructive insects.

The General Government has been liberal in its support of The State Agricultural College, but its financial support is given conditionally. The leading purpose kept in view, by the acts of Congress relating to the support of agricultural colleges, is to provide means for teaching "such branches of learning as are related to agriculture and the mechanic arts in such manner as the Legislatures of the States may respectively prescribe in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

In view of the fact that The State Agricultural College is well-equipped to meet the requirements set forth in the Congressional act before quoted, we deem it unwise and injudicious for the State to grant appropriations of money to other institutions to be used in duplicating departments of special instruction now in successful operation at Fort Collins.

We find all the departments of the College working in complete harmony, and believe that they are in better condition for effective work than ever before. The books and papers in the Secretary's office, as far as examined, are models of neatness and evince business ability. We further believe that The State Agricultural College is worthy of the confidence and support of the people of Colorado, and that it should be liberally supported by State appropriations.

All of which is respectfully submitted,

James F. Robinson,
Representing the State Grange.

N. C. Alford,
Representing the State Bee-Keepers' Association.

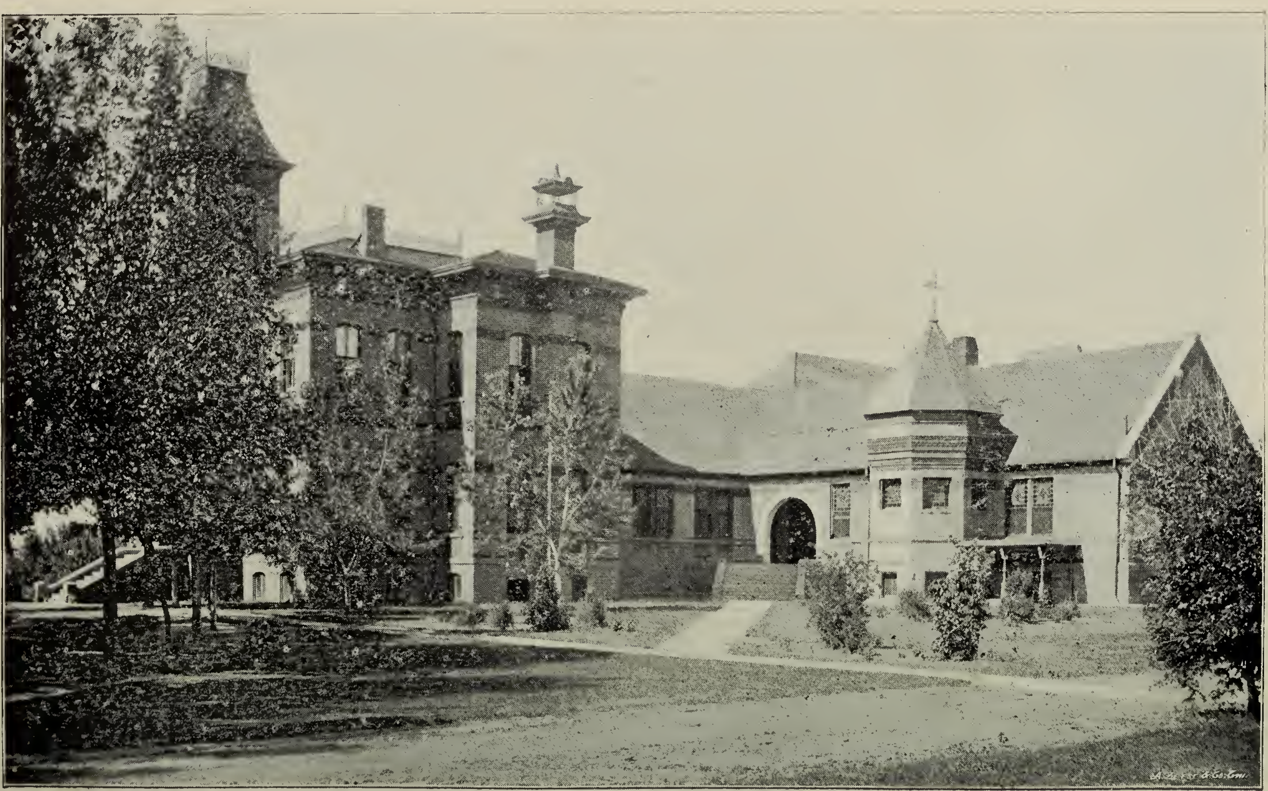
John Tobias,
Secretary of the State Board of Horticulture.

Fort Collins, Colo., January 6, 1894.

Calendar of Exercises.

1894-1895.

Entrance Examinations	Monday, September 3, 1894
Fall Term begins	Tuesday, September 4, 1894
Fall Term closes	Friday, November 30, 1894
Winter Term begins	Monday, December 3, 1894
Holiday Recess begins	Friday, December 21, 1894
Holiday Recess closes	Saturday, January 5, 1895
Winter Term closes	Friday, March 15, 1895
Spring Term begins	Monday, March 18, 1895
Baccalaureate Address	Sunday, June 2, 1895
State Board of Agriculture meets	Wednesday, June 5, 1895
Commencement Exercises	Thursday, June 6, 1895



MAIN BUILDING, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

THE
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LIBRARY.

SUMMER SCENE, FRONT OF MAIN BUILDING, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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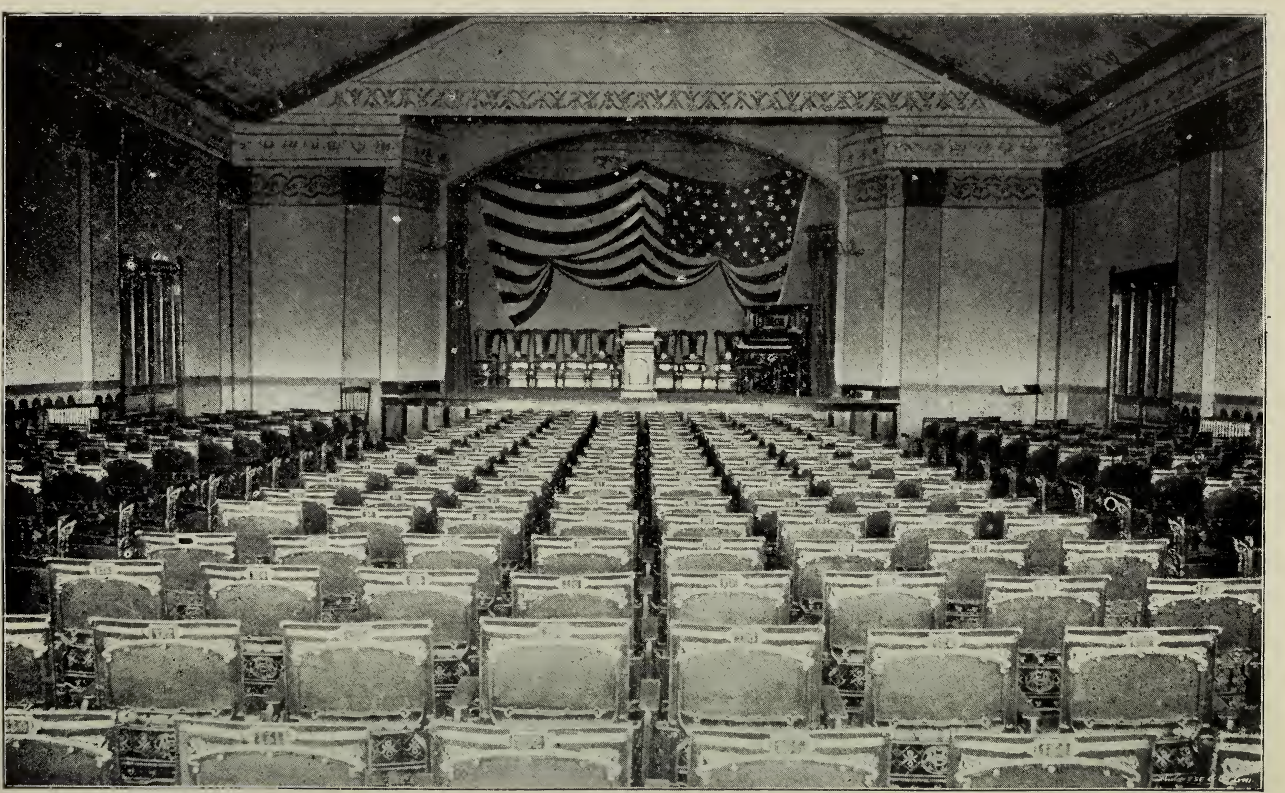
LIBRARY



COLLEGE CHAPEL, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

THE
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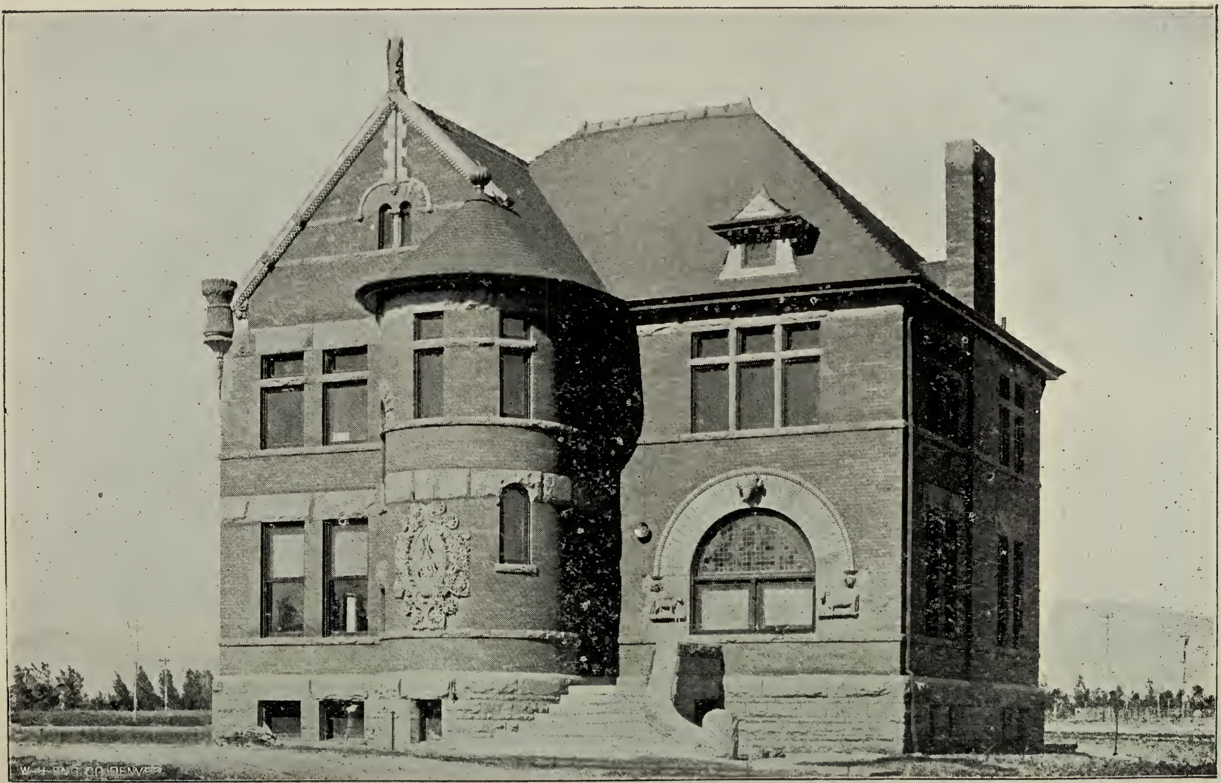

AGRICULTURAL HALL, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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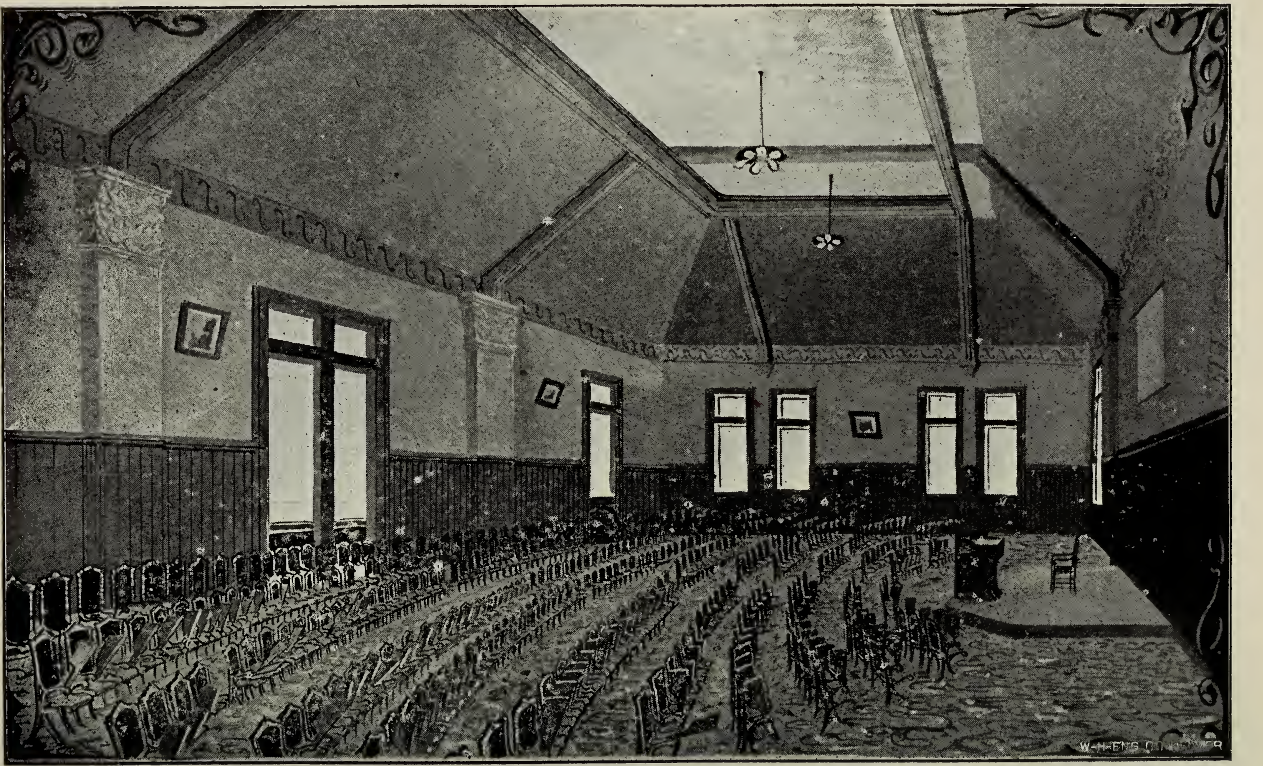
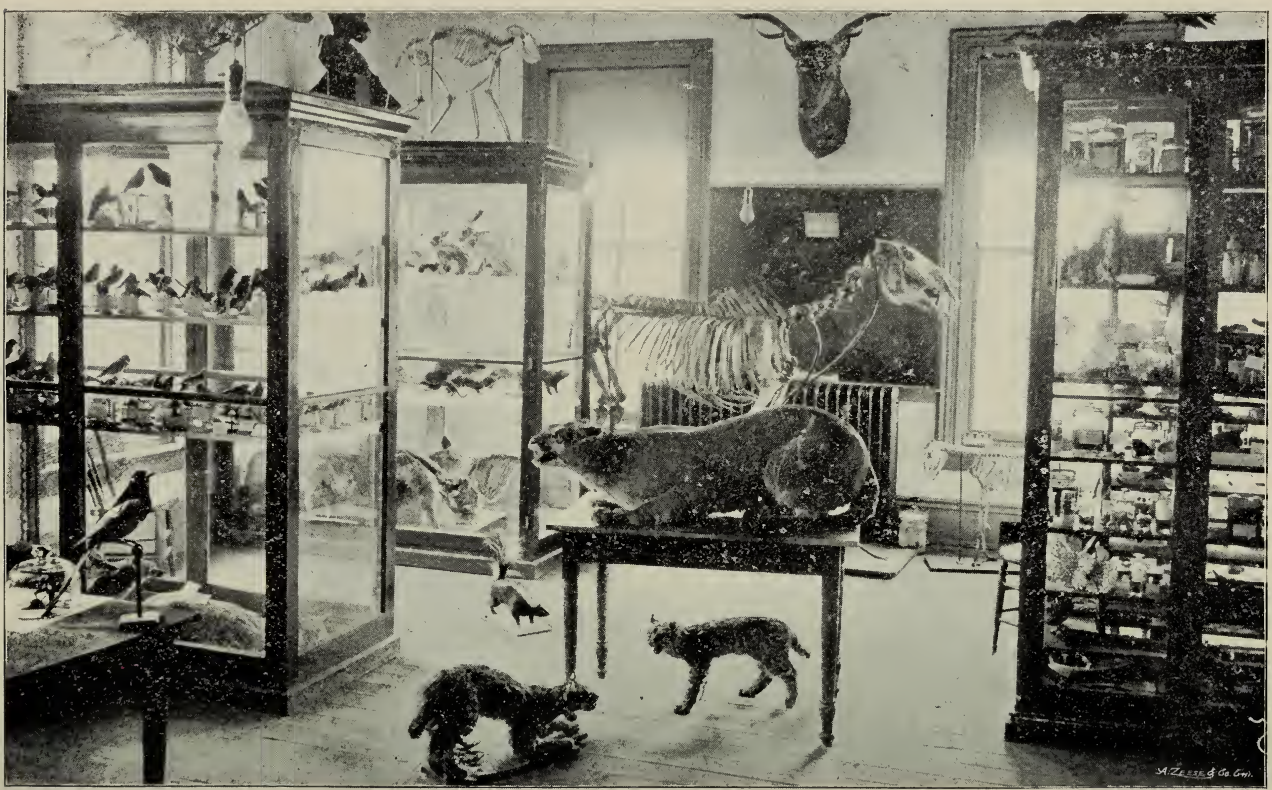


LECTURE ROOM, AGRICULTURAL HALL, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

JOHN CRERAR
LIBRARY



MUSEUM, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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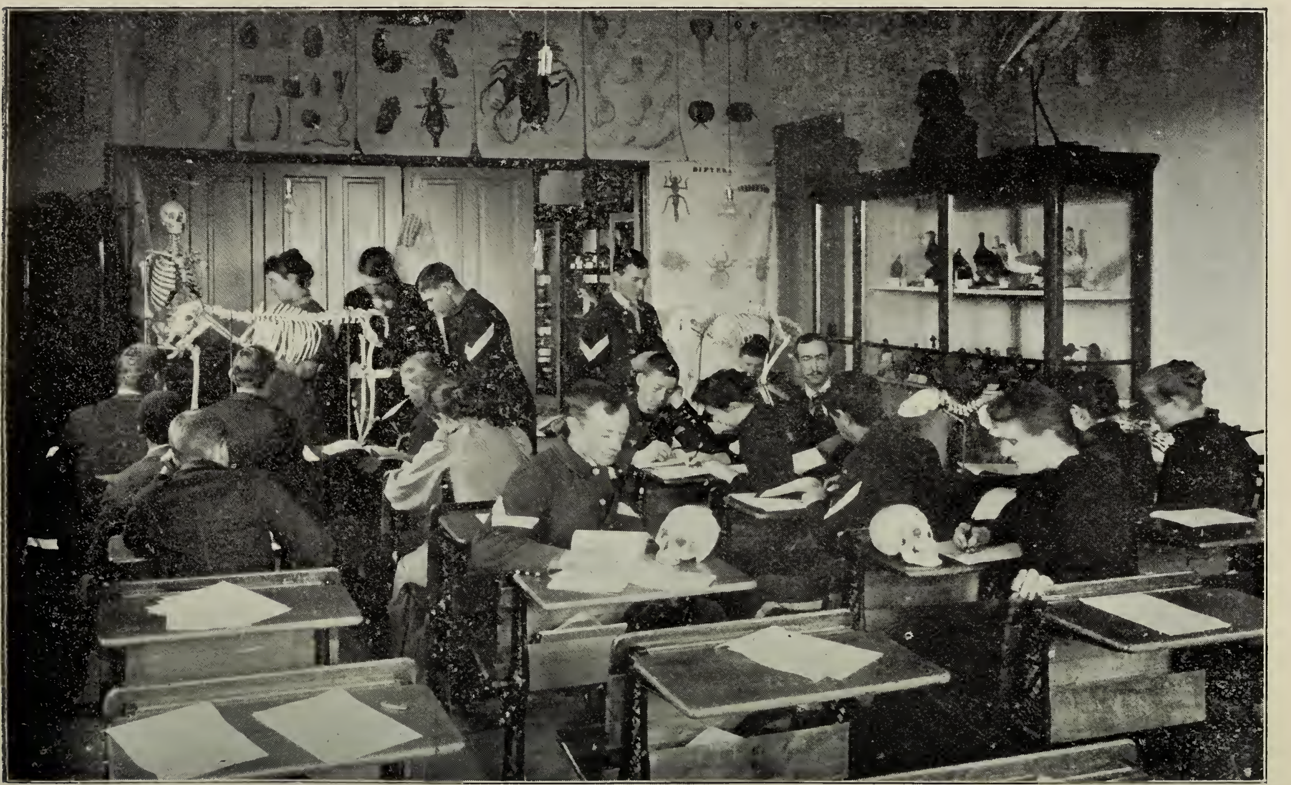

CLASS IN PHYSIOLOGY, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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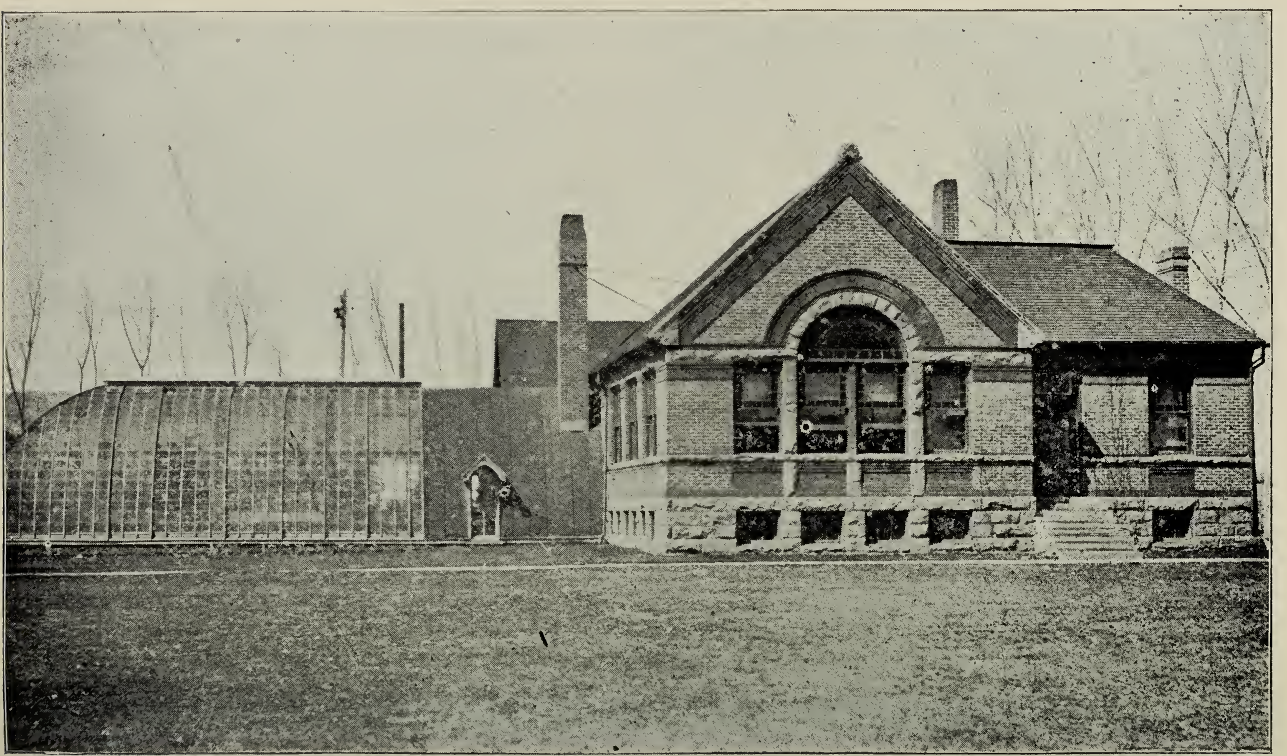

HORTICULTURAL HALL, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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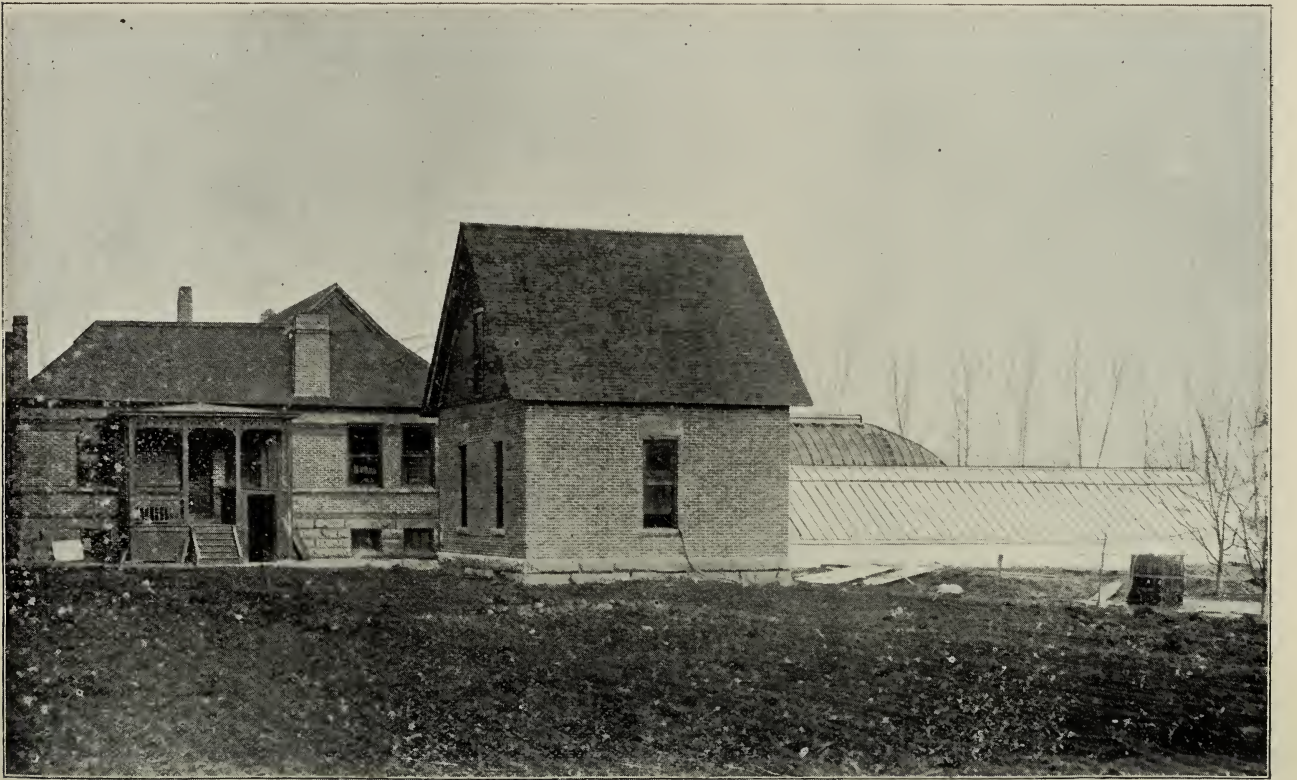

FORCING HOUSE, HORTICULTURAL DEPARTMENT, STATE AGRICULTURAL COLLEGE. FORT COLLINS, COLORADO.

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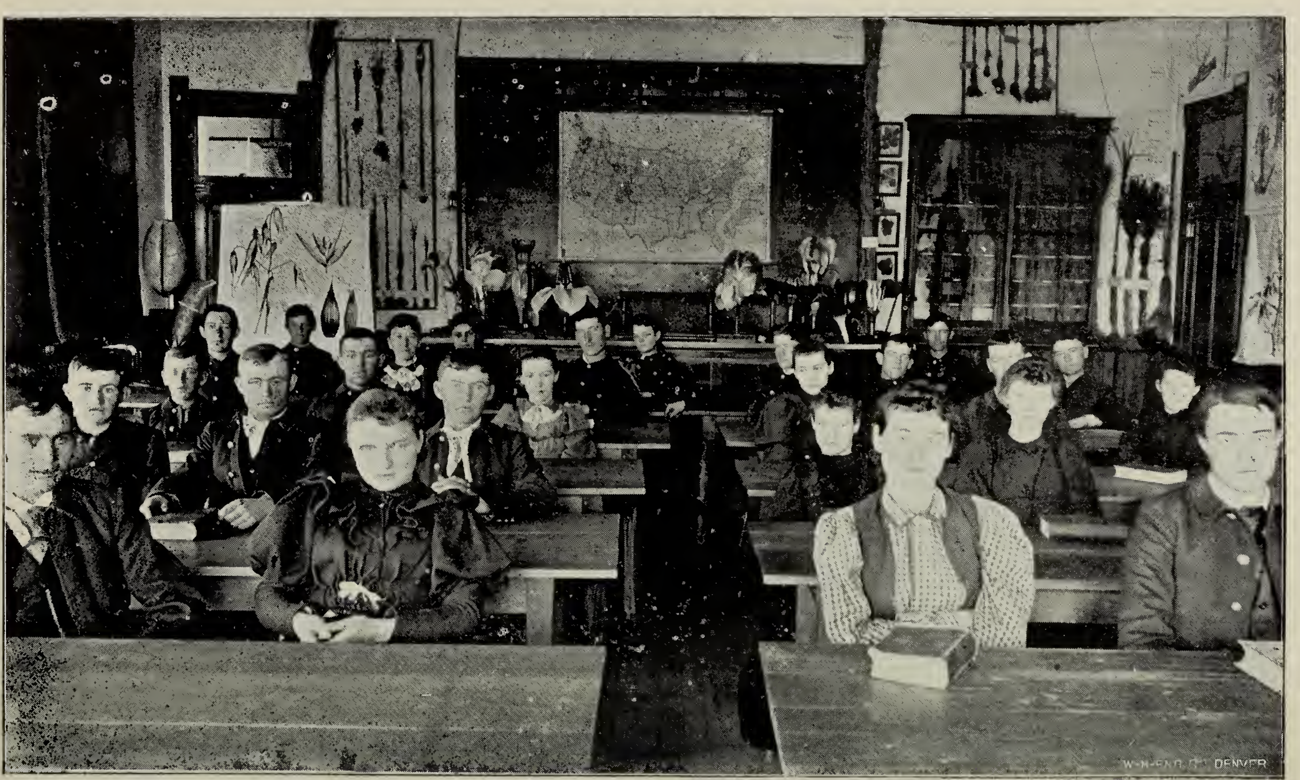

LECTURE ROOM AND CLASS, DEPARTMENT OF BOTANY AND HORTICULTURE, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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CHEMICAL LABORATORY, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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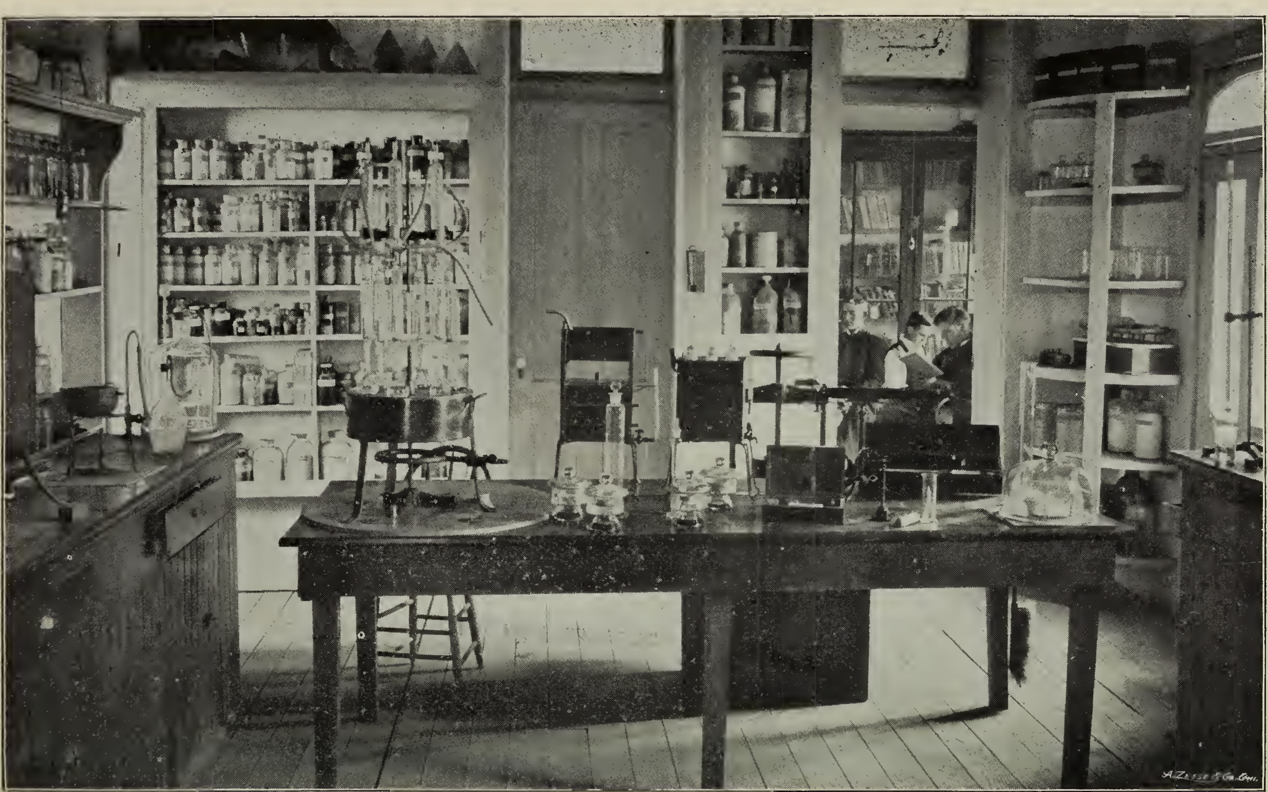

STATION LABORATORY, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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CLASS IN HISTORY, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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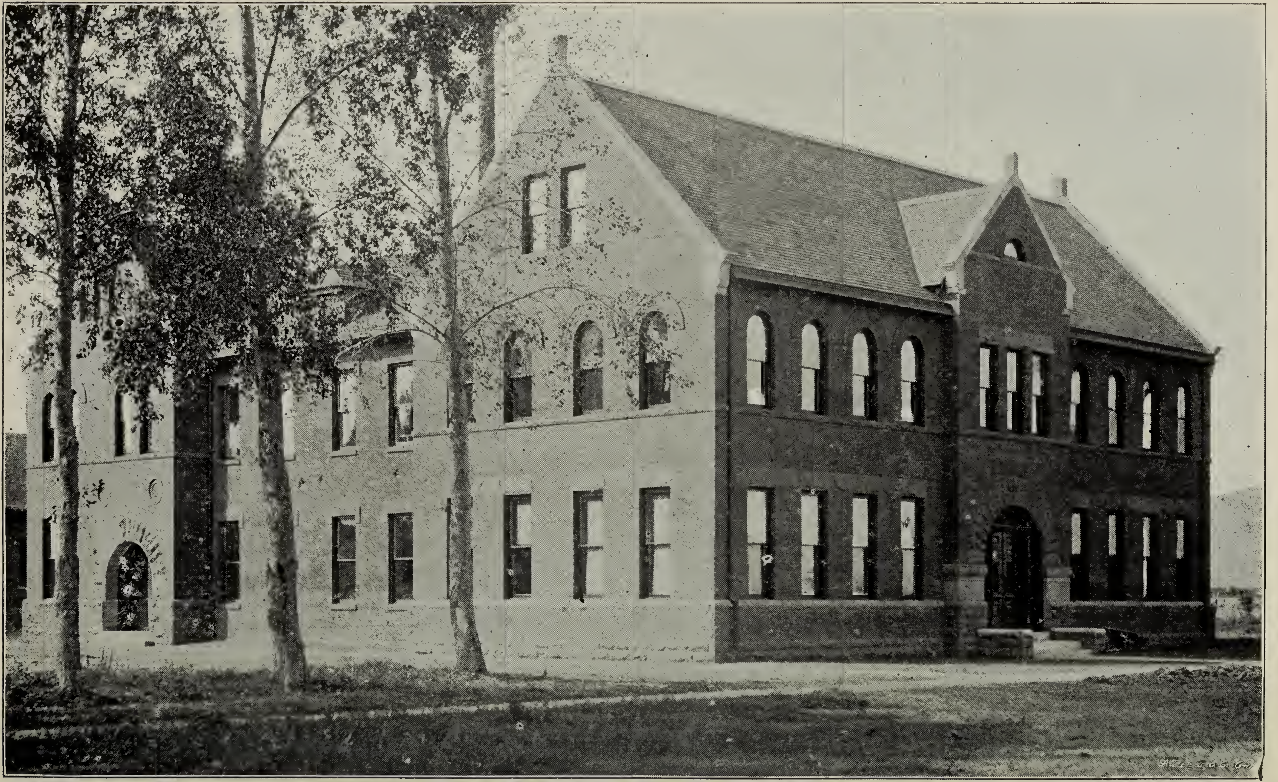

MECHANIC ARTS HALL, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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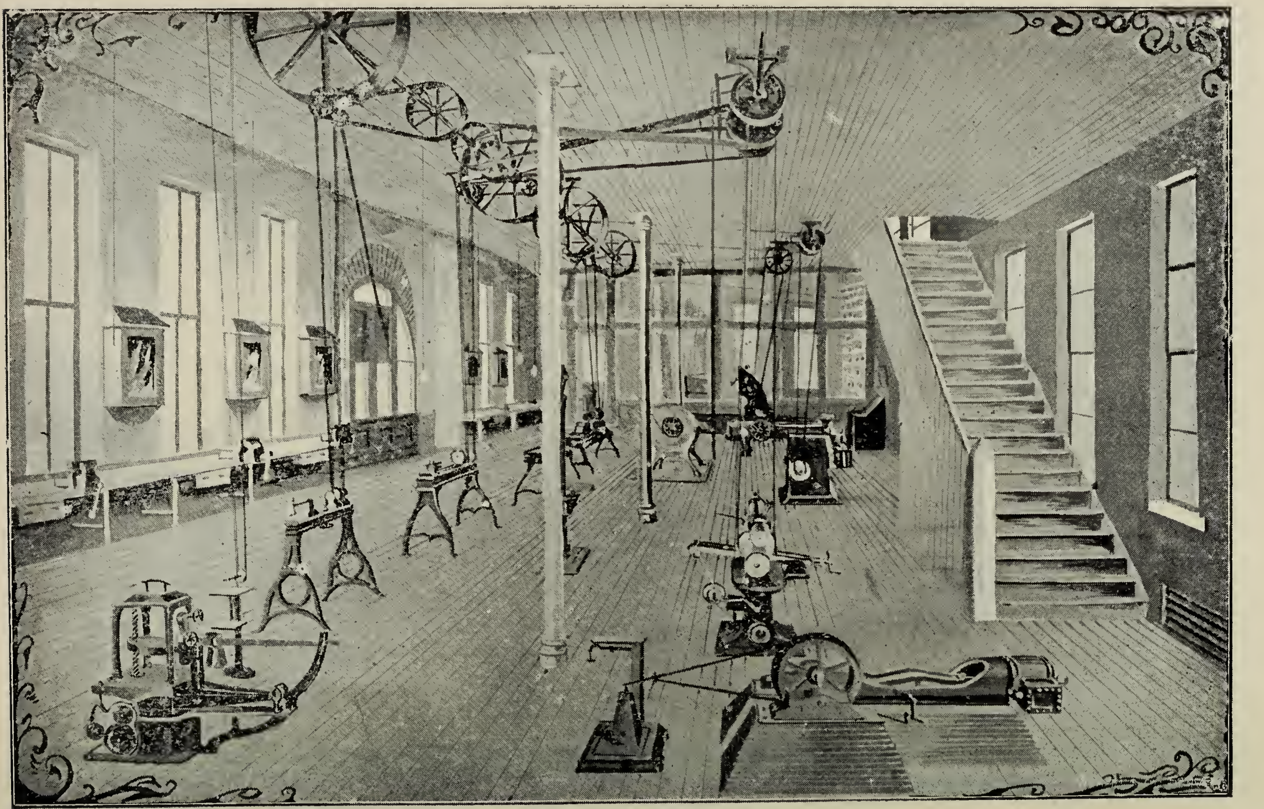

MACHINE ROOM, MECHANICAL DEPARTMENT, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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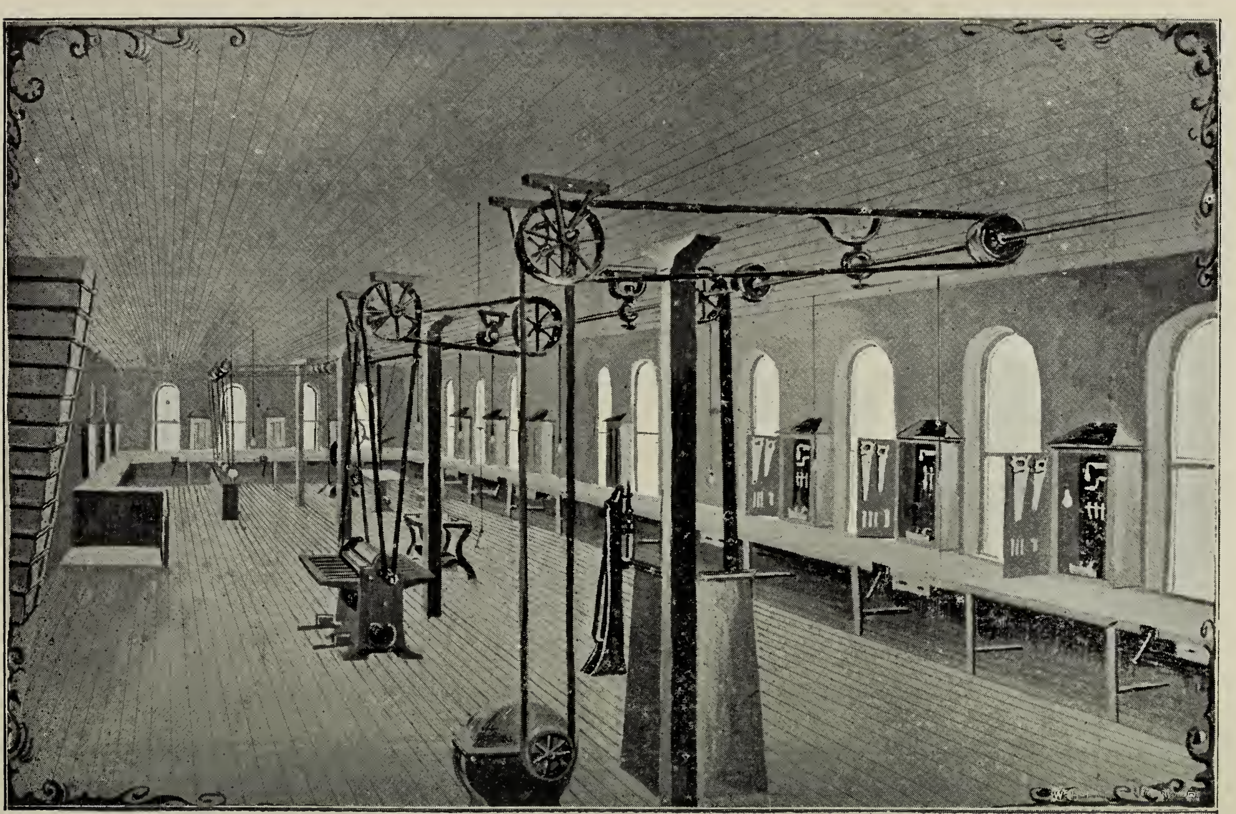

WOOD-WORKING ROOM, MECHANICAL DEPARTMENT, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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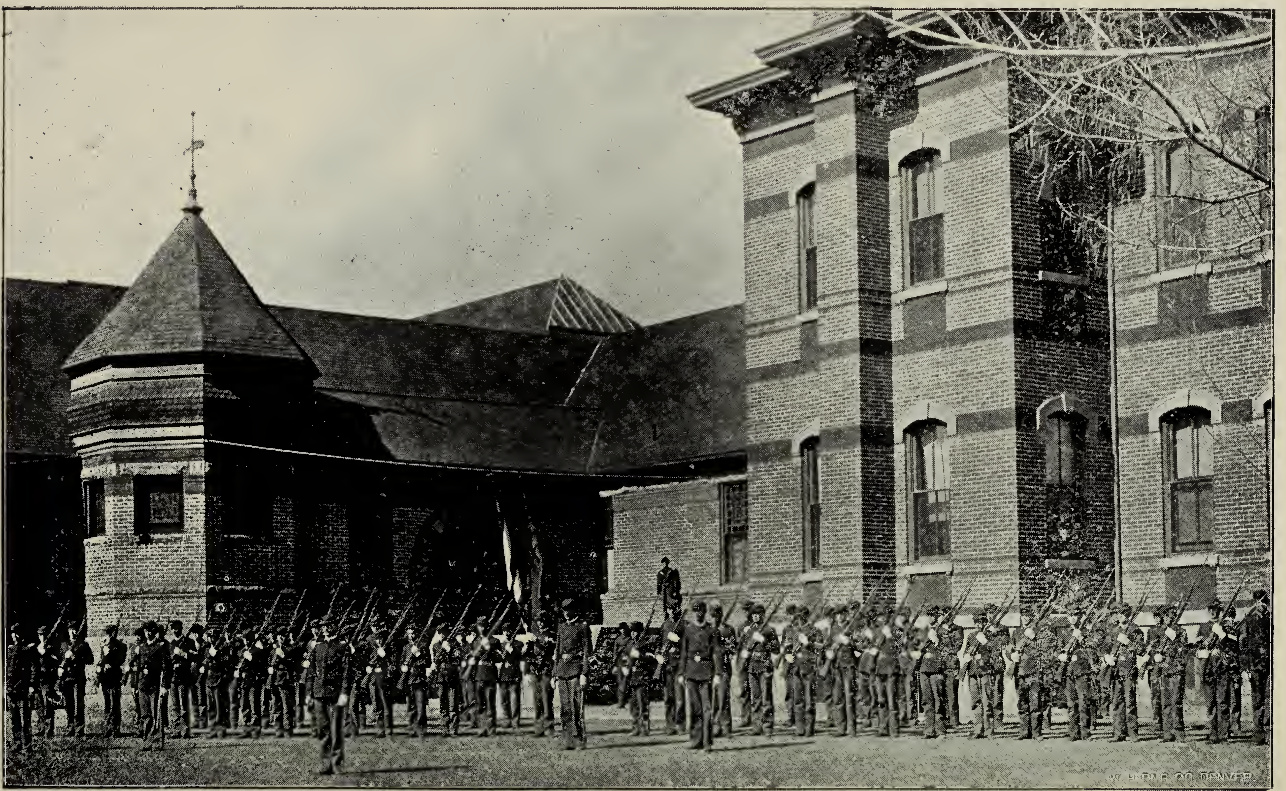

MILITARY COMPANIES, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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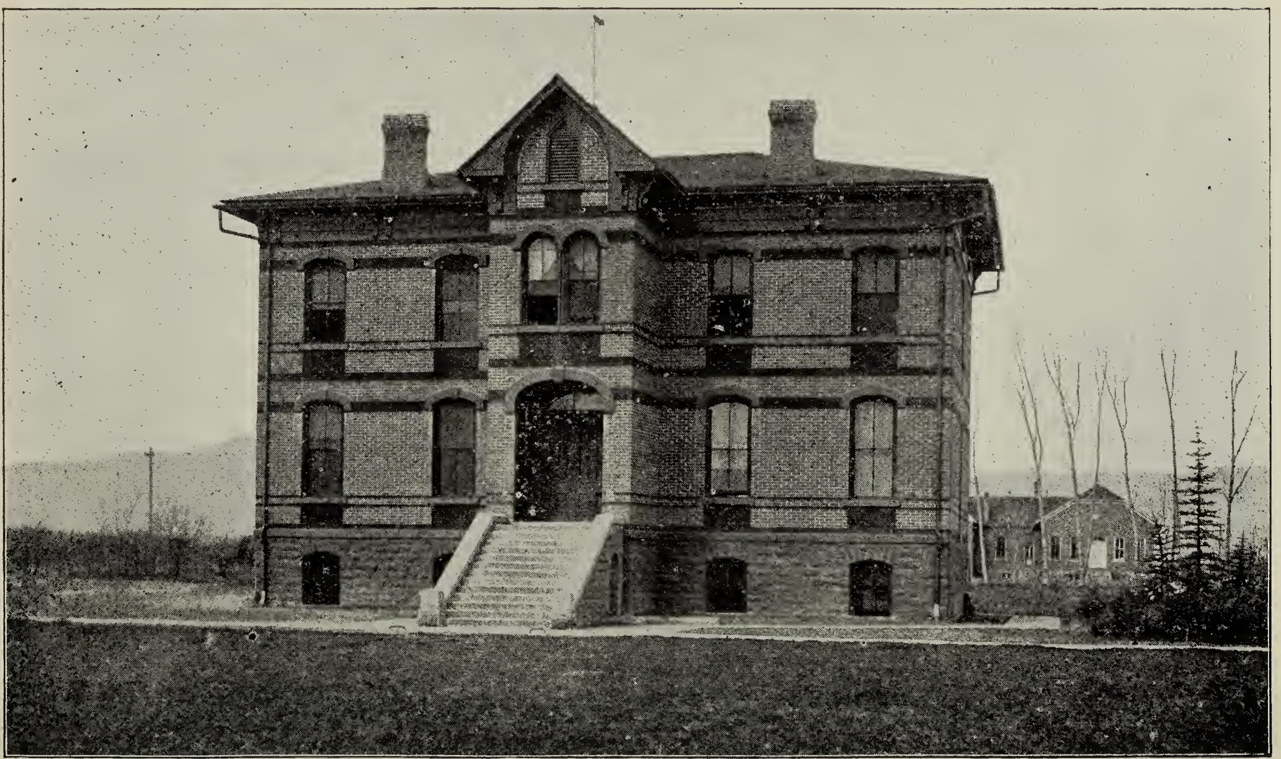

PHYSICS AND IRRIGATION ENGINEERING BUILDING, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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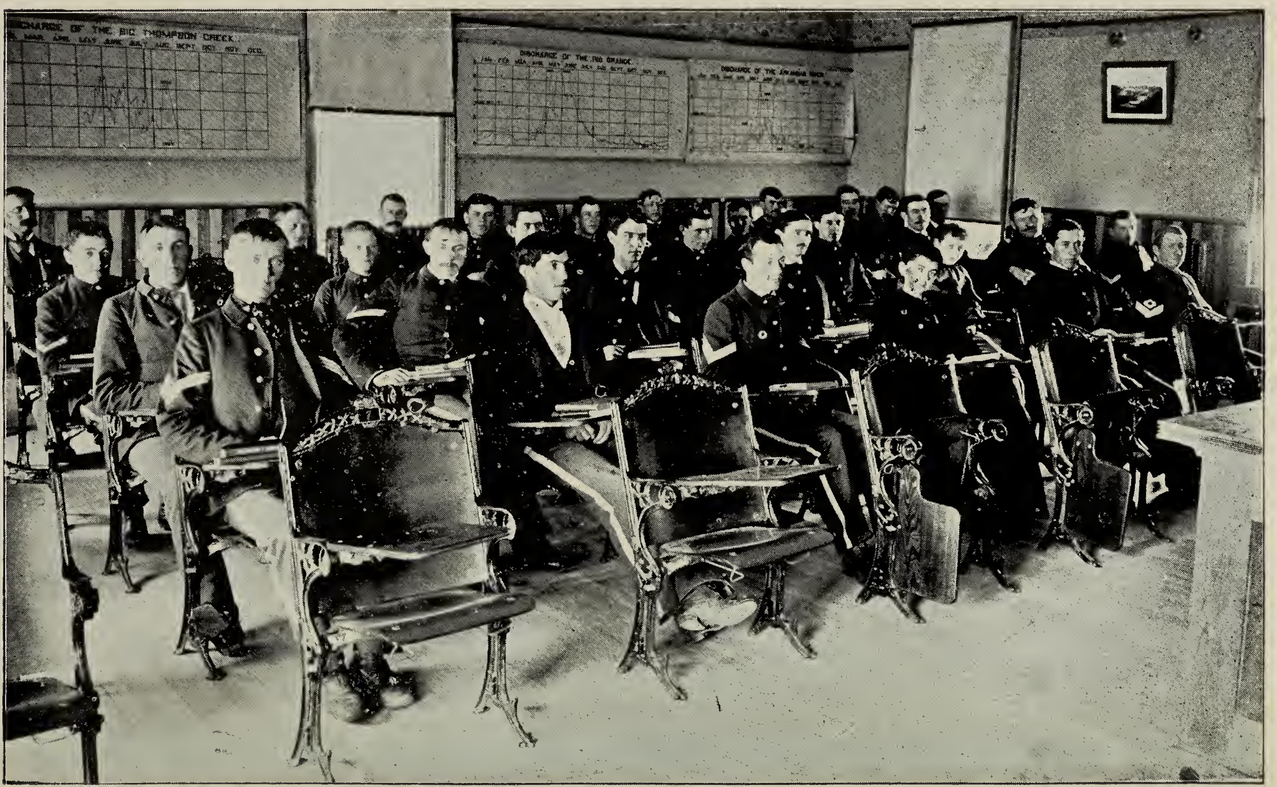
DISCHARGE OF THE BIG THOMPSON CREEK
DISCHARGE OF THE RIO GRANDE

LECTURE ROOM AND CLASS, DEPARTMENT OF ENGINEERING AND PHYSICS, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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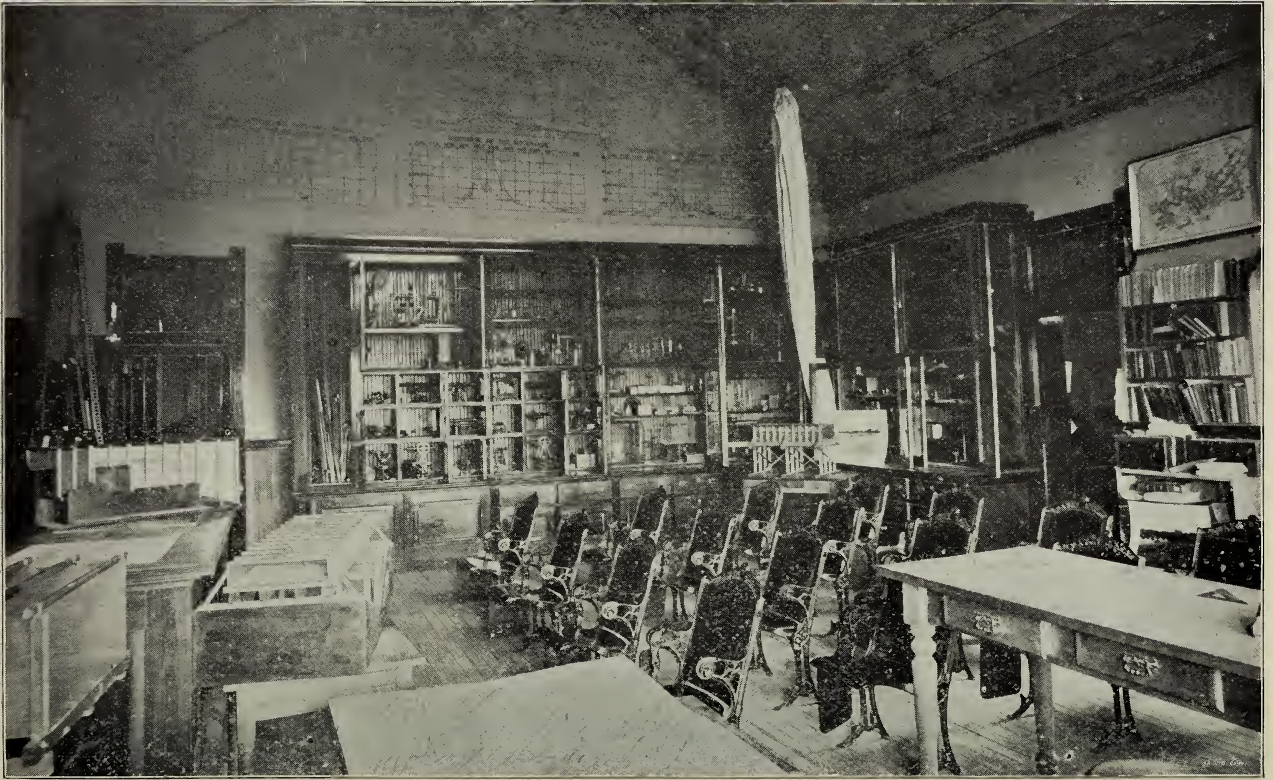

CLASS ROOM, PHYSICS AND ENGINEERING, STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLORADO.

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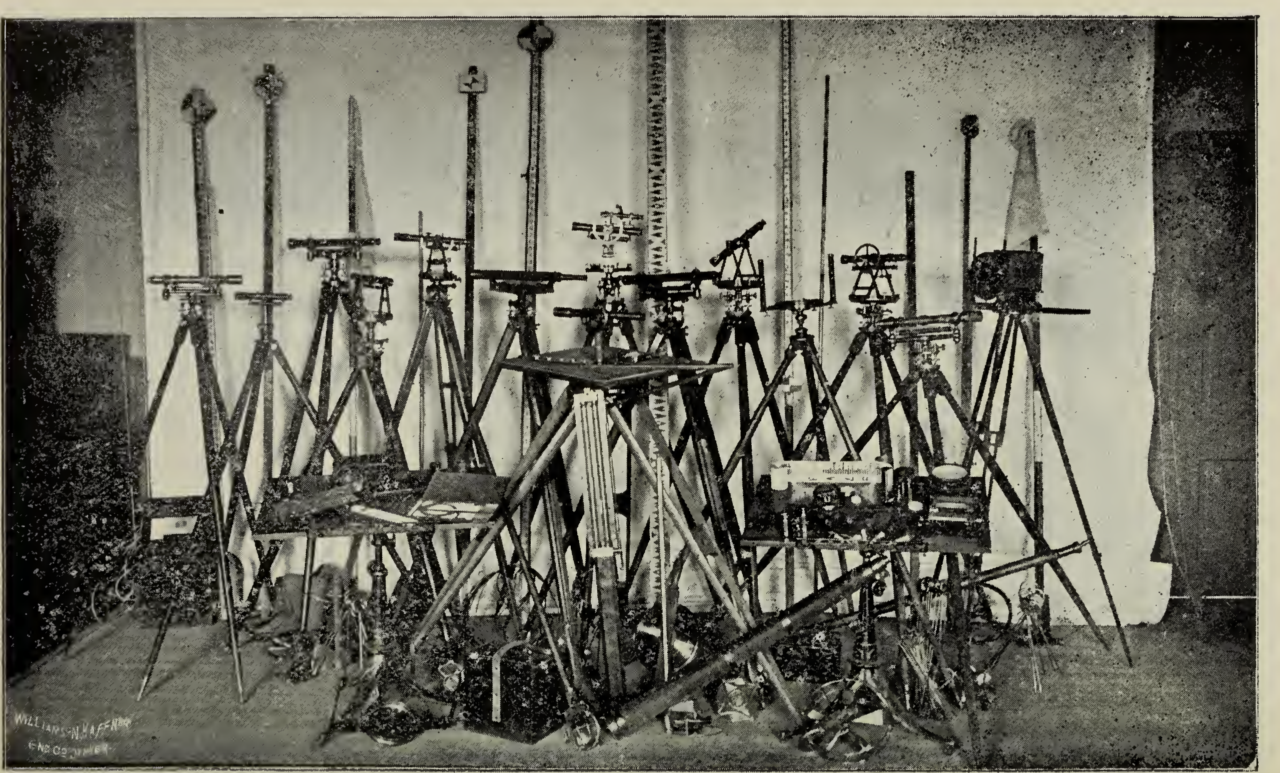

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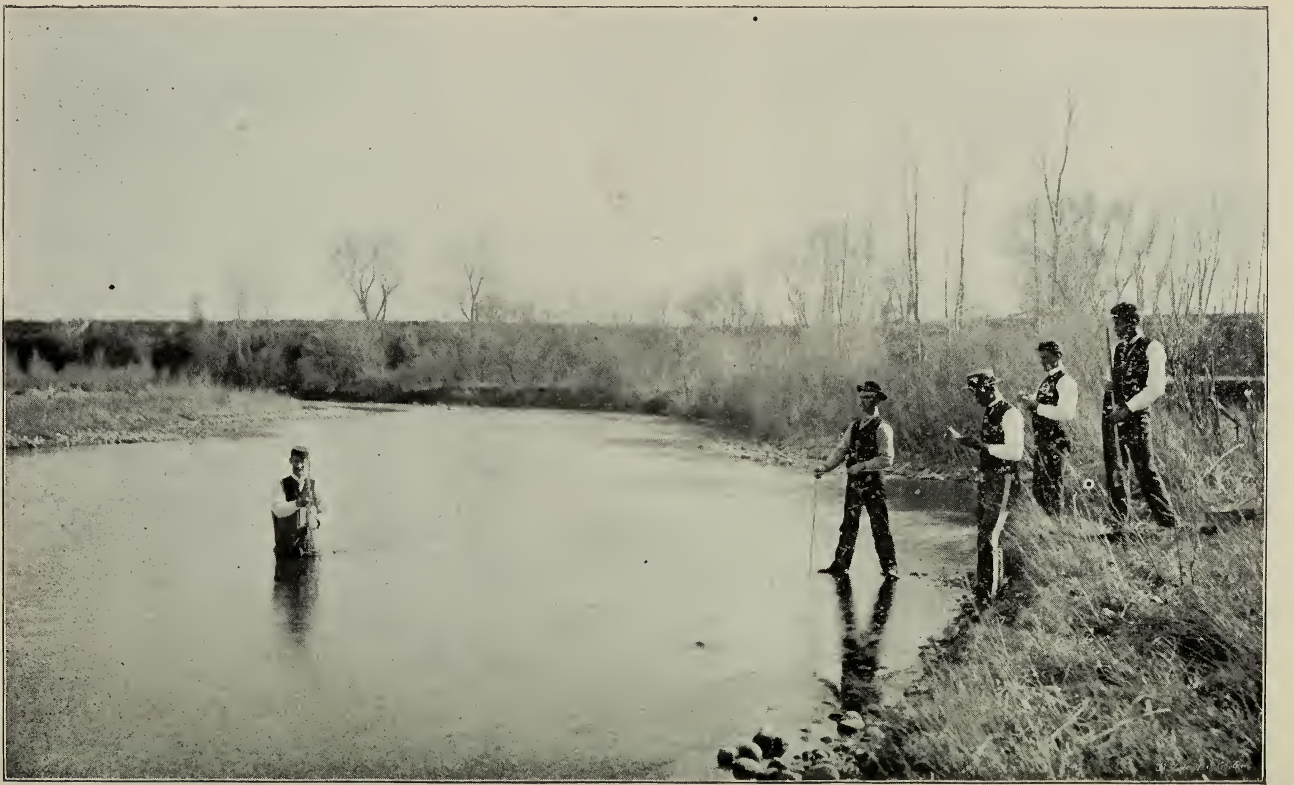
THE
JOHN CRERAR
LIBRARY



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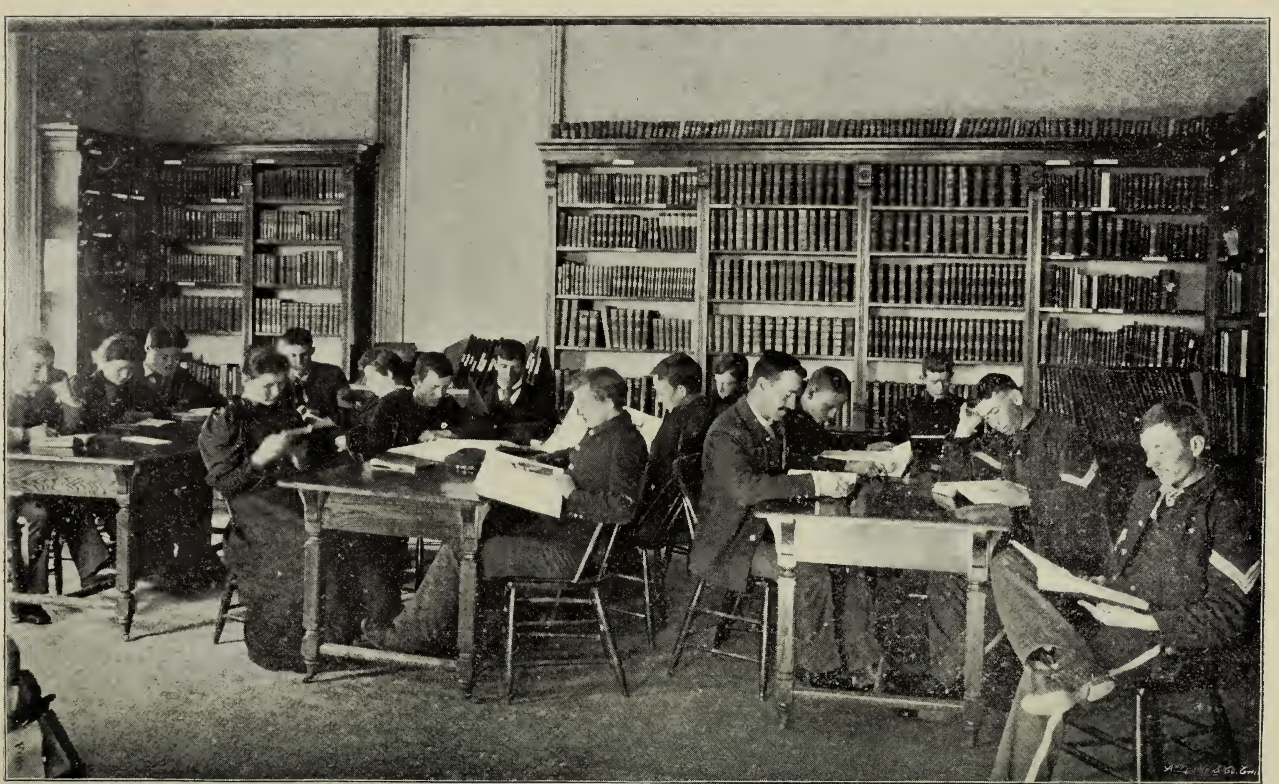

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CALENDAR.

1894-1895.

SEPTEMBER—1894.

S	M	T	W	T	F	S
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OCTOBER—1894.

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JANUARY—1895.

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JUNE—1895.

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JULY—1895.

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AUGUST—1895.

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